APRIL 1955 PARTS LIST No. 6201

KODAK SYNCHRO-RAPID 800 SHUTTER

WITH

Kodak Anastar Lens, 101mm f/4.5 for Kodak Tourist Camera
Kodak Ektar Lens, 78mm f/3.5 for Kodak Chevron Camera
Kodak Ektar Lens, 101mm f/4.5 for Graflex Cameras
Kodak Ektar Lens, 101mm f/4.5-Catalog listed shutter

This revised parts list supersedes parts list No. 1-5250. Shutters covered by this list are identified by symbols A, B, C, and D. For key to symbols refer to page 9. Parts which are common to all shutters are identified by part name and number only. Parts not common to all shutters are identified by the symbol for the individual shutter.

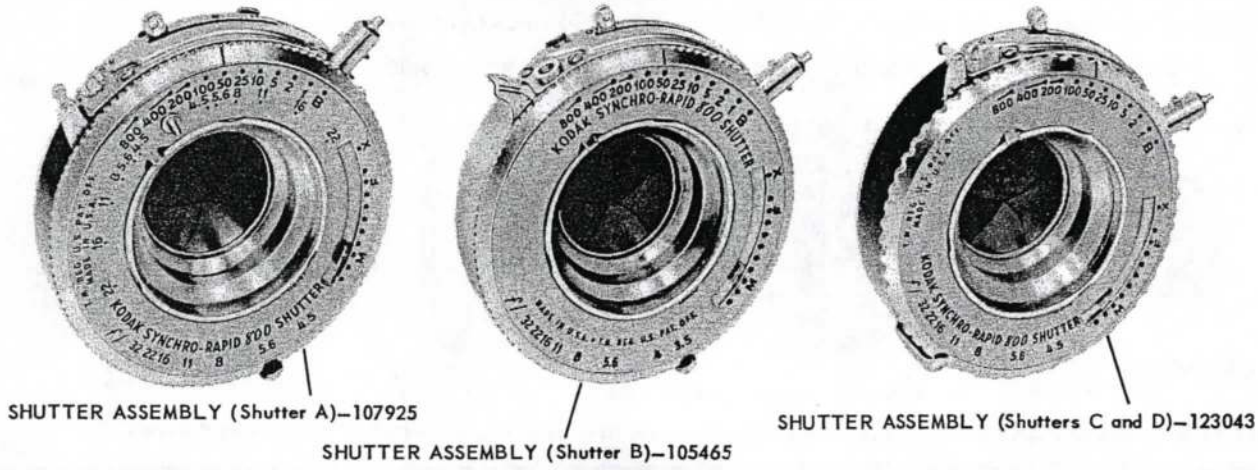
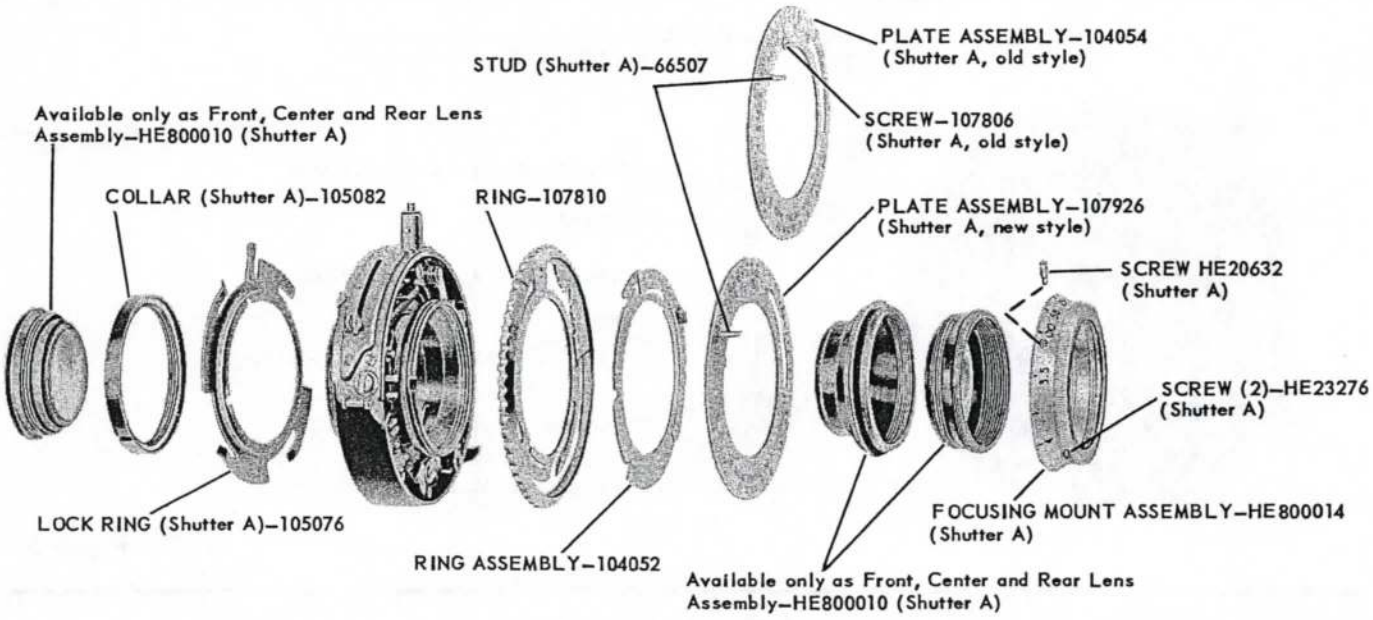
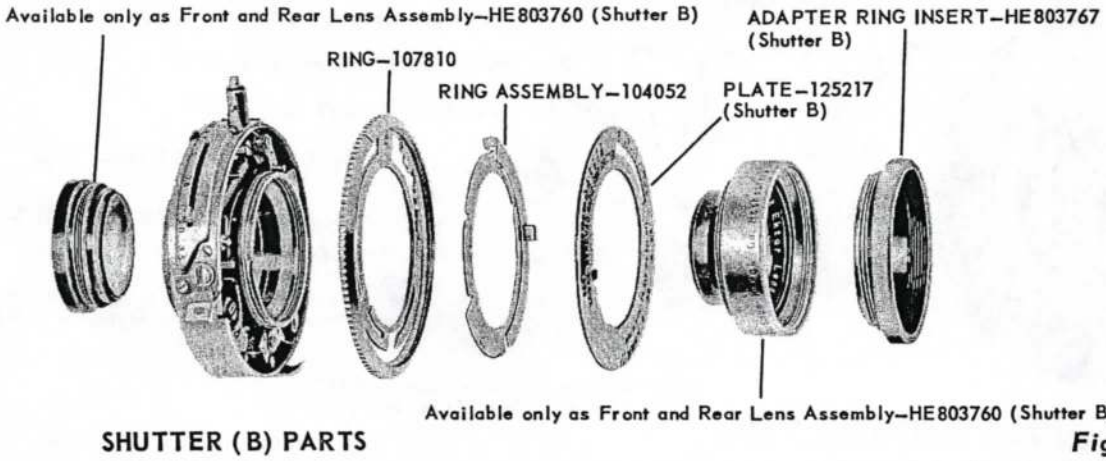


Figure 1



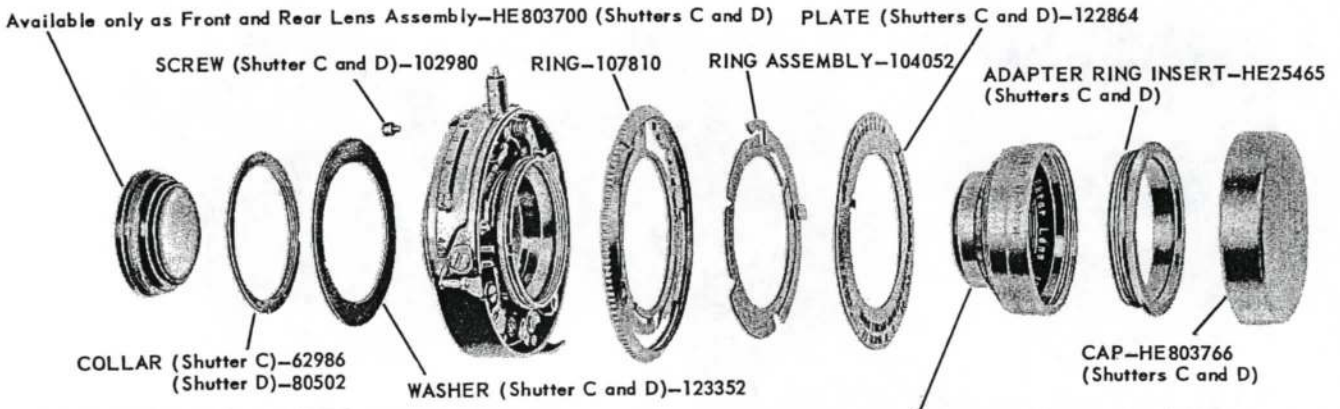
SHUTTER (A) PARTS

Figure 2



SHUTTER (B) PARTS

Figure 3


Available only as Front and Rear Lens Assembly–HE803700 (Shutters C and D)
PLATE (Shutters C and D)–122864
SCREW (Shutter C and D)–102980
RING–107810
RING ASSEMBLY–104052
ADAPTER RING INSERT–HE25465
(Shutters C and D)
COLLAR (Shutter C)–62986
(Shutter D)–80502
WASHER (Shutter C and D)–123352
CAP–HE803766
(Shutters C and D)
Available only as Front and Rear Lens Assembly–HE803700 (Shutters C and D)

SHUTTER C and D PARTS

Figure 4

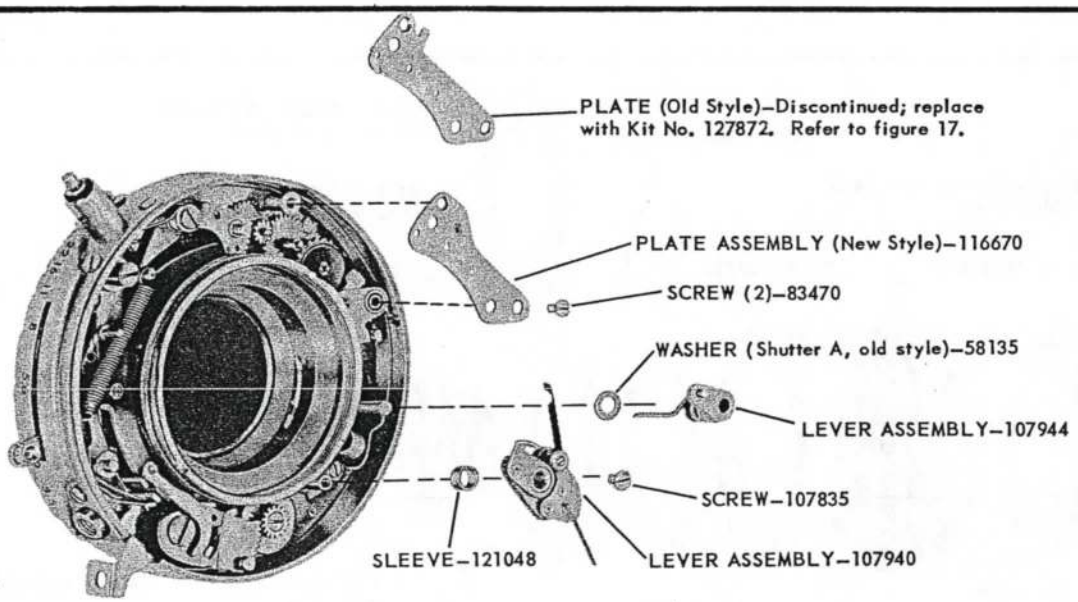


Figure 5

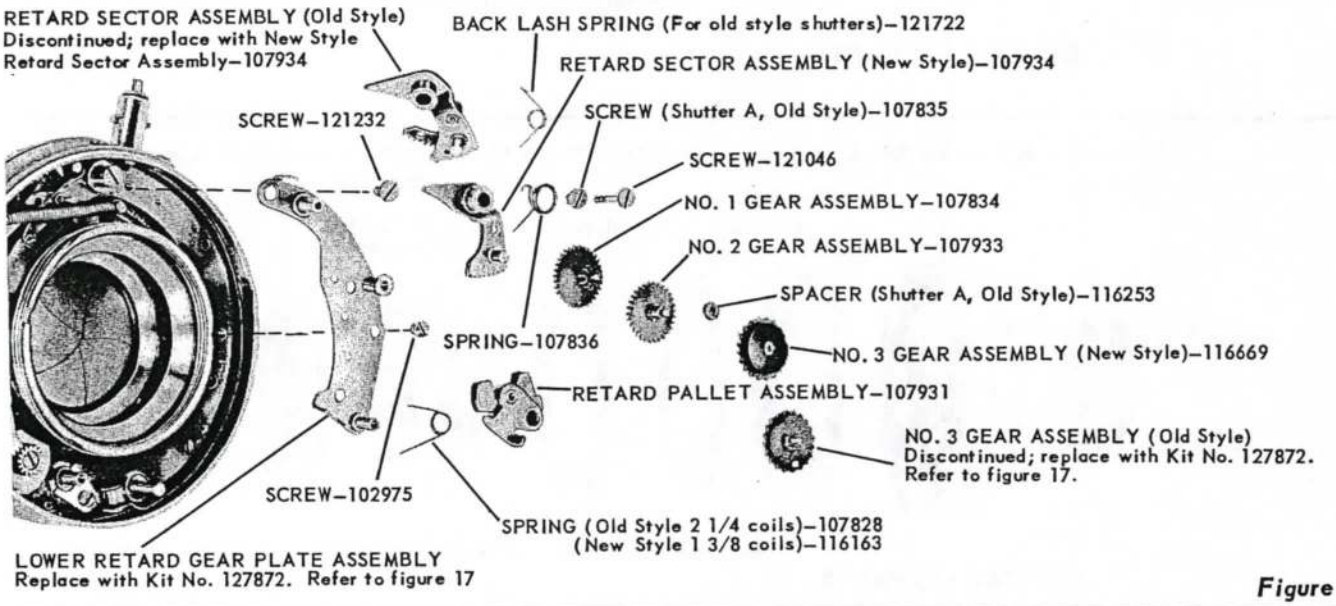

RETARD SECTOR ASSEMBLY (Old Style) Discontinued; replace with New Style Retard Sector Assembly–107934
BACK LASH SPRING (For old style shutters)–121722
RETARD SECTOR ASSEMBLY (New Style)–107934
SCREW–121232
SCREW (Shutter A, Old Style)–107835
SCREW–121046
NO. 1 GEAR ASSEMBLY–107834
NO. 2 GEAR ASSEMBLY–107933
SPACER (Shutter A, Old Style)–116253
SPRING–107836
NO. 3 GEAR ASSEMBLY (New Style)–116669
RETARD PALLET ASSEMBLY–107931
NO. 3 GEAR ASSEMBLY (Old Style) Discontinued; replace with Kit No. 127872. Refer to figure 17.
SCREW–102975
SPRING (Old Style 2 1/4 coils)–107828
(New Style 1 3/8 coils)–116163
LOWER RETARD GEAR PLATE ASSEMBLY
Replace with Kit No. 127872. Refer to figure 17

Figure 6

Always give PART NUMBER and NAME when ordering parts

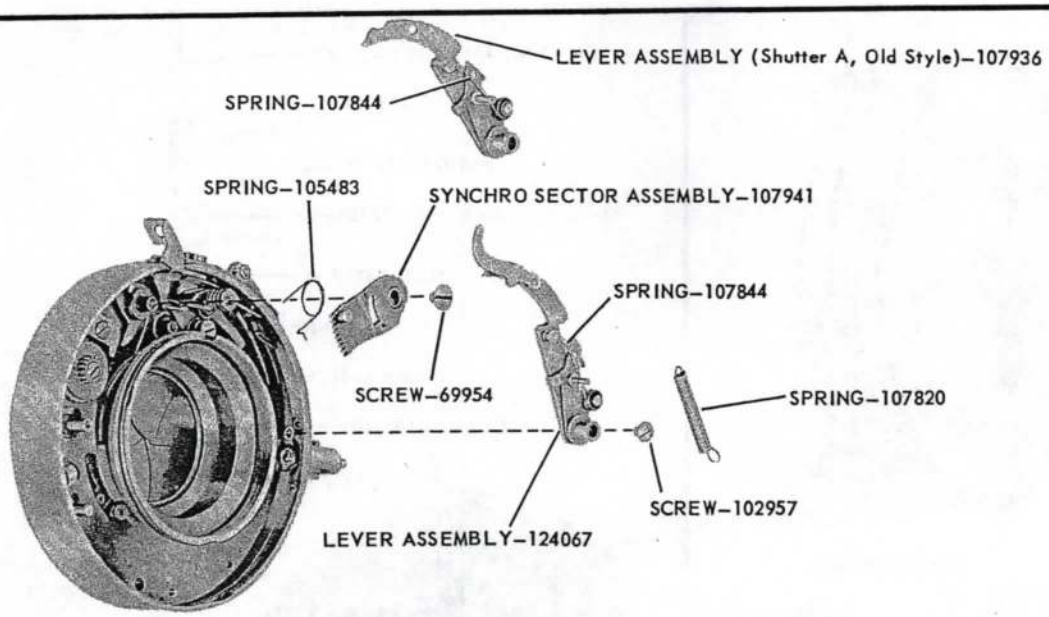


Figure 7

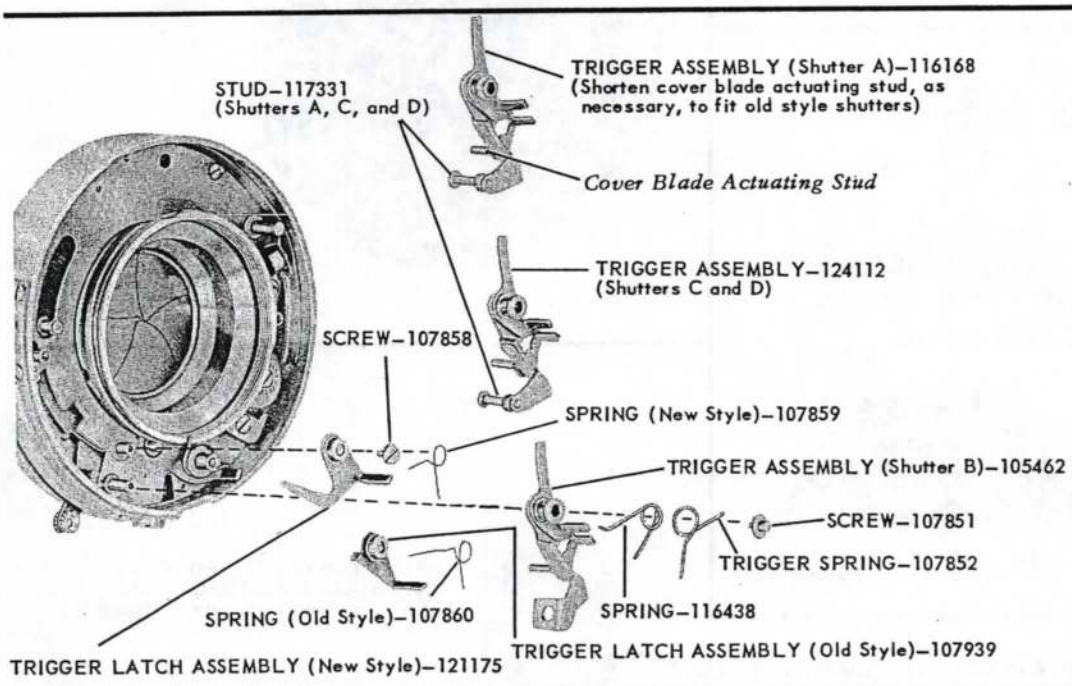


Figure 8

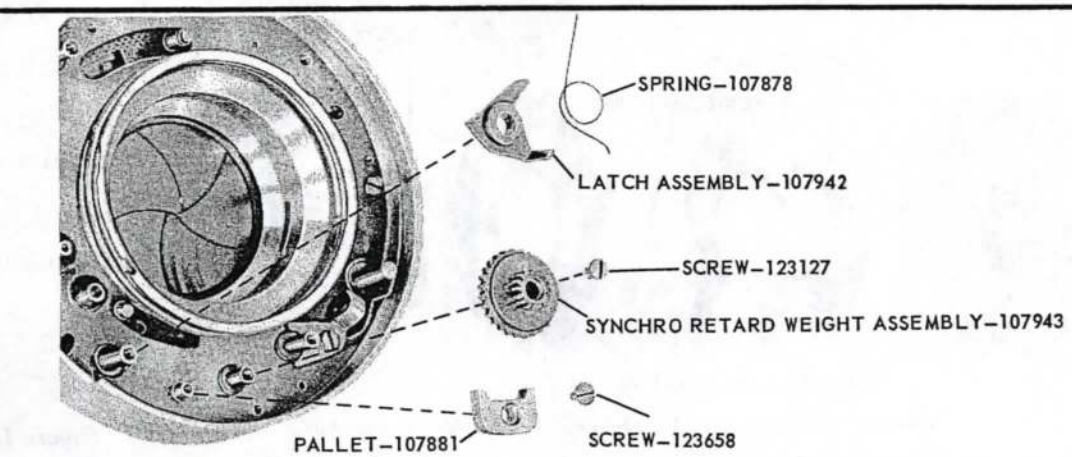


Figure 9

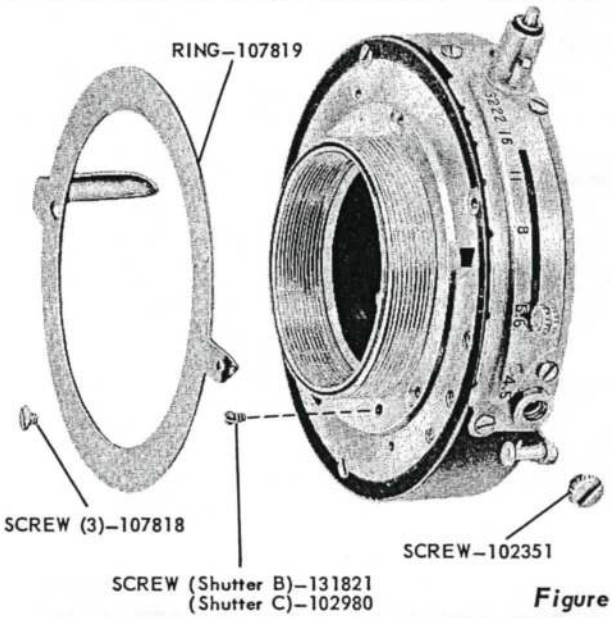


Figure 10

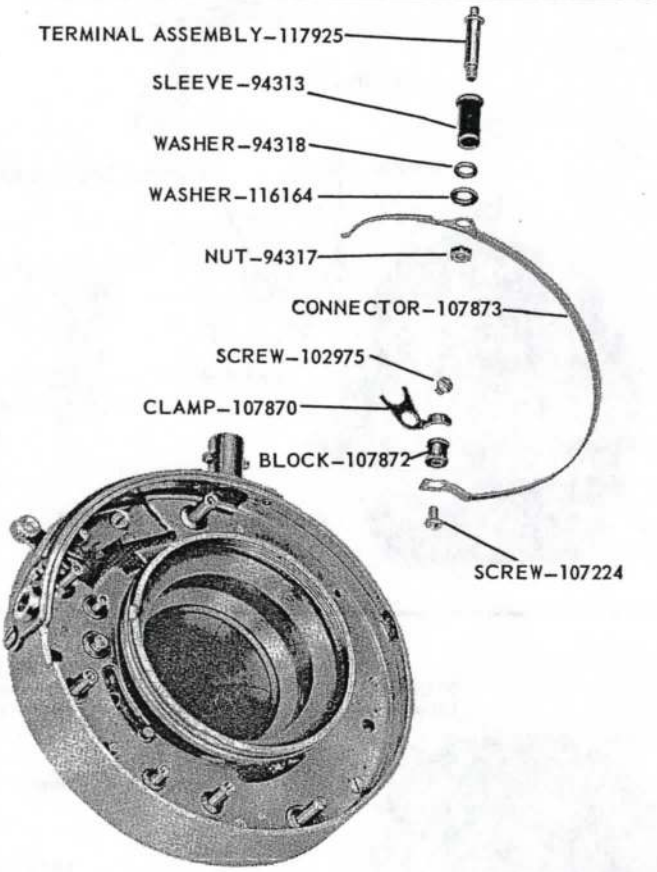


Figure 11

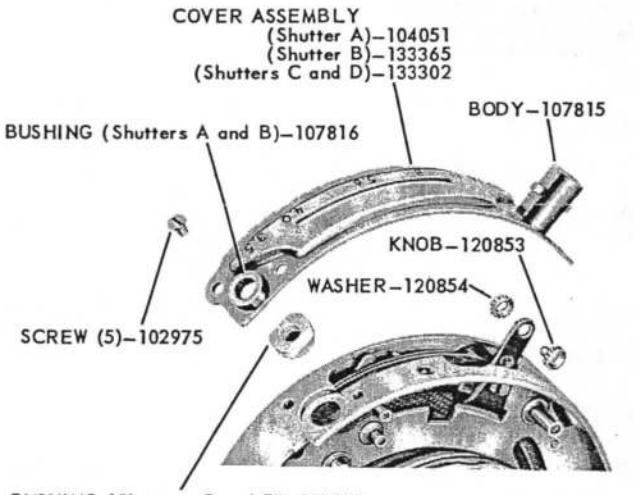


Figure 12

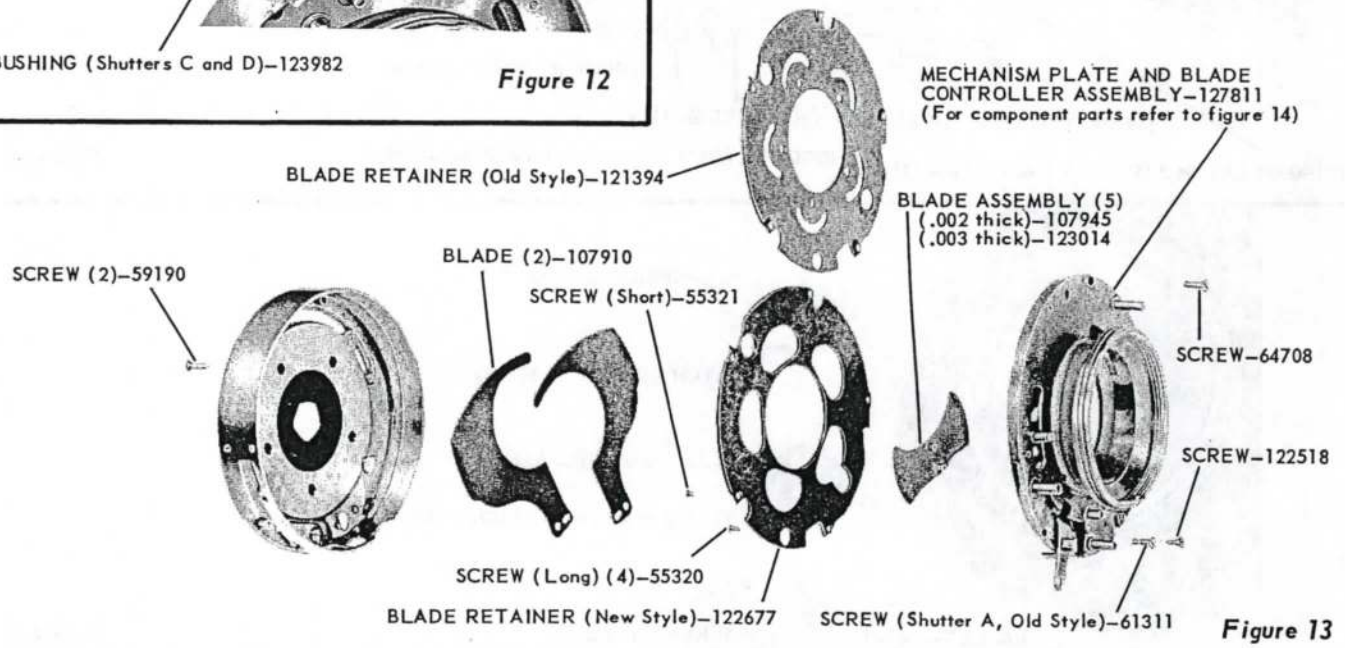


Figure 13

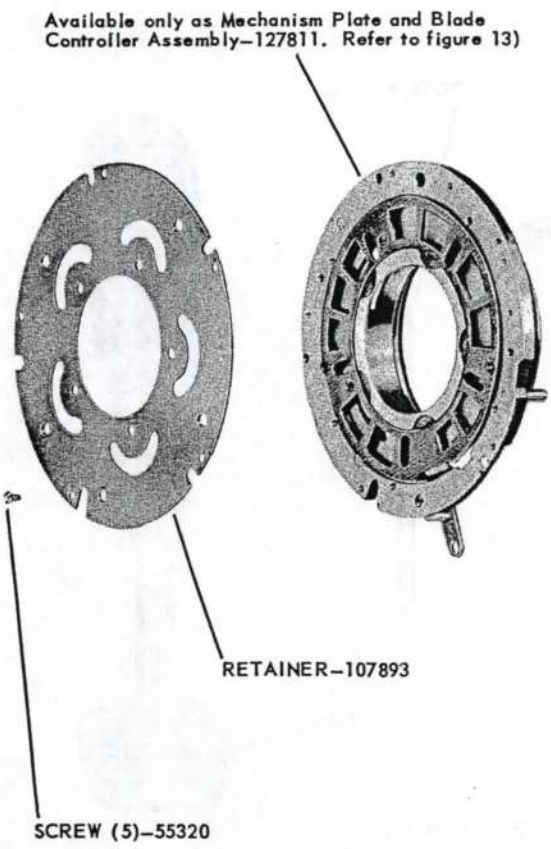

Available only as Mechanism Plate and Blade Controller Assembly–127811. Refer to figure 13)
RETAINER–107893
SCREW (5)–55320

Figure 14

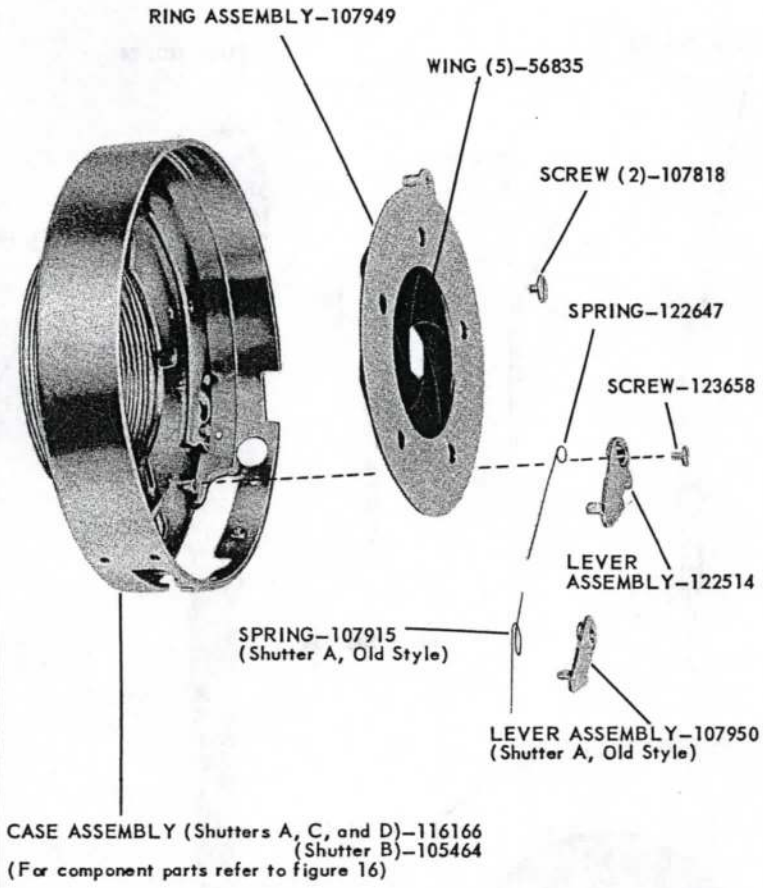

RING ASSEMBLY–107949
WING (5)–56835
SCREW (2)–107818
SPRING–122647
SCREW–123658
LEVER ASSEMBLY–122514
SPRING–107915 (Shutter A, Old Style)
LEVER ASSEMBLY–107950 (Shutter A, Old Style)
CASE ASSEMBLY (Shutters A, C, and D)–116166 (Shutter B)–105464 (For component parts refer to figure 16)

Figure 15

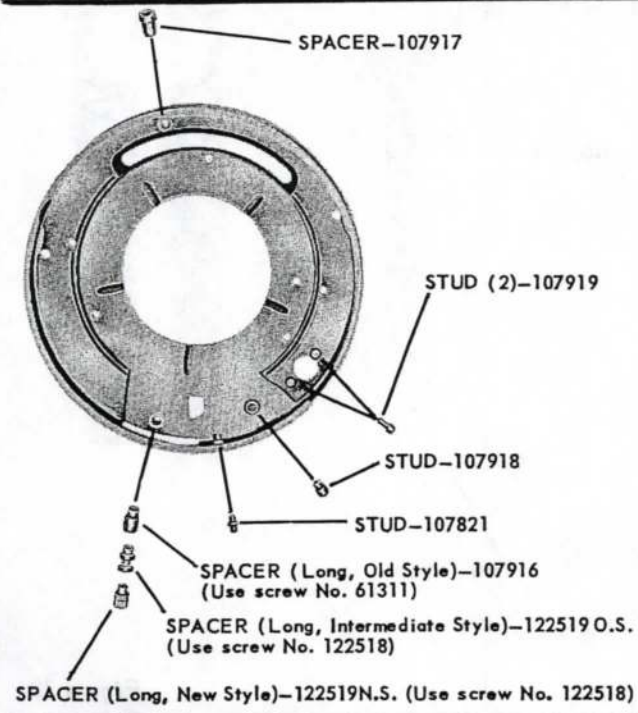

SPACER–107917
STUD (2)–107919
STUD–107918
STUD–107821
SPACER (Long, Old Style)–107916 (Use screw No. 61311)
SPACER (Long, Intermediate Style)–122519 O.S. (Use screw No. 122518)
SPACER (Long, New Style)–122519N.S. (Use screw No. 122518)

Figure 16

KIT NO. 127872

Necessary parts for replacing Old Style Upper and Lower Retard Gear Plates and Old Style No. 3 Pinion Assembly.

UPPER RETARD GEAR PLATE ASSEMBLY (NEW STYLE)–116670
NO. 3 PINION ASSEMBLY (NEW STYLE)–116669
LOWER RETARD GEAR PLATE ASSEMBLY (NEW STYLE) (Available only as Kit No. 127872)

Figure 17

SERVICE TOOLS

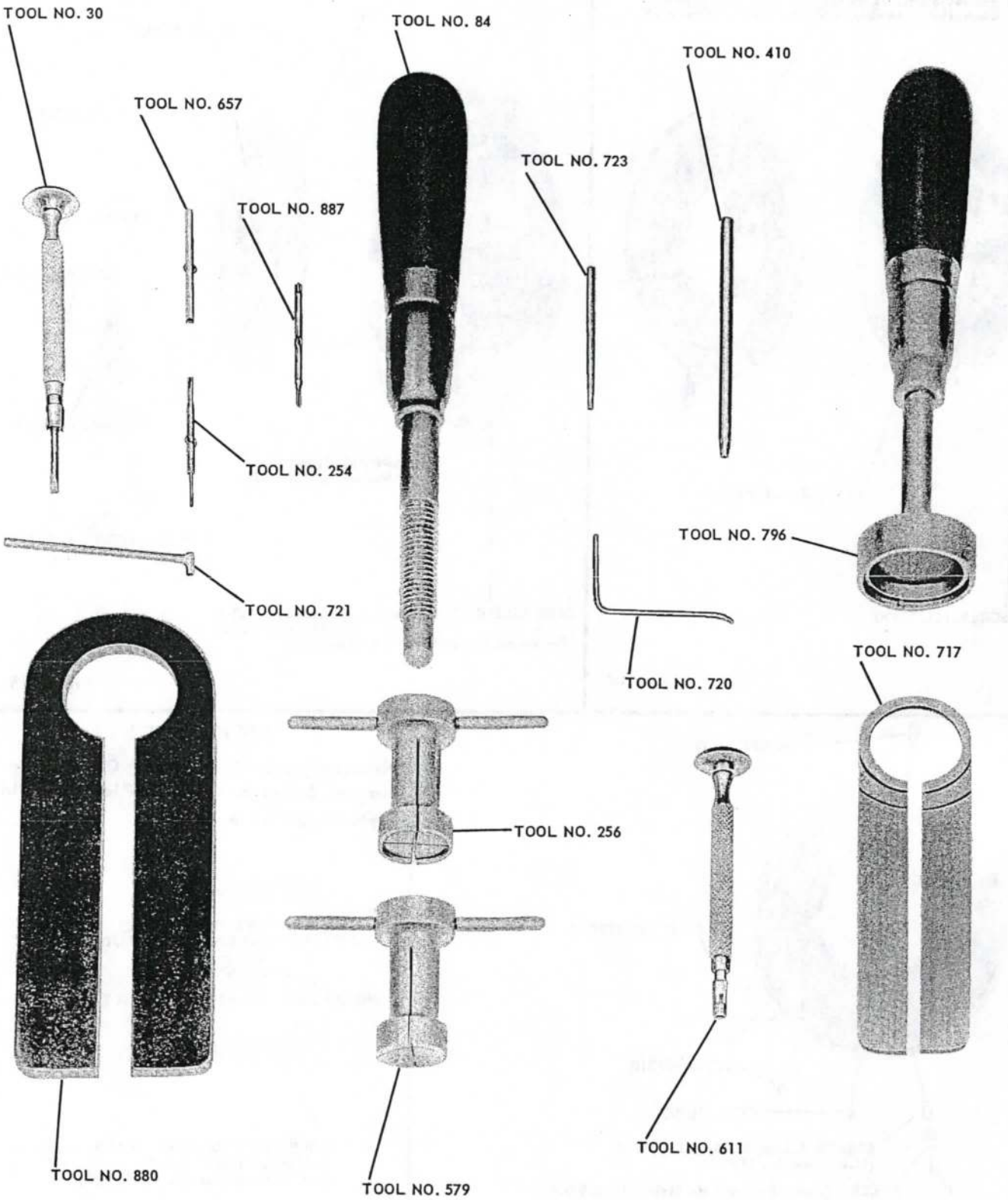


Figure 18

KEY TO SYMBOLS

KODAK SYNCHRO-RAPID 800 SHUTTER
with

- **A** *Kodak Anastar Lens, 101mm f/4.5 for Kodak Tourist Camera*
- **B** *Kodak Ektar Lens, 78mm f/3.5 for Kodak Chevron Camera*
- **C** *Kodak Ektar Lens, 101mm f/4.5 for Graflex Cameras*
- **D** *Kodak Ektar Lens, 101mm f/4.5-Catalog listed shutter*

FIG.	PART NO.	SHUTTERS	PART NAME	REQD
18	30		Jewelers' Screwdriver	1
18	84		Handle (For tools No. 256 and 579)	1
18	254		Blade - Jewelers' screwdriver (For adjusting contact lever assembly, use with tool Nos. 30 and 721)	1
18	256	B	Wrench - Expanding (For removing rear lens from Chevron camera shutter, use with tool No. 84)	1
18	410	A	Wrench - Hexagon socket, 1/16 inch (For focus mount stop screw on Tourist camera shutters)	1
18	579	A C D	Wrench - Expanding (For removing rear lenses from Tourist, Graflex and Catalog listed shutters, use with tool No. 84)	1
18	611		Wrench - Hexagon socket, 1/8 inch (For trigger screw)	
18	657		Blade - Jewelers' screwdriver (For inner terminal assembly, use with tool No. 30)	1
18	717	A	Wrench - Contracting (For removing front lens assembly on Tourist camera shutters)	1
18	720		Tool - Bending (For adjusting release lever latch assembly)	1
18	721		Wrench - Special socket (For adjusting contact lever assembly, use with tool Nos. 30 and 721)	1
18	723		Tool - Bending (For adjusting trigger stud)	1
18	796	A	Wrench - Shutter retaining collar (For Tourist cameras)	1
18	880	B C D	Wrench - Contracting (For removing front lens assemblies from Chevron, Graflex and Catalog listed shutters)	1
18	887		Blade - Jewelers' screwdriver (For small fulcross screws, use with tool No. 30)	1
2	HE20632	A	Screw - Focus mount stop	1
2	HE23276	A	Screw - Focus mount lock	2
4	HE25465	C D	Insert - Adapter ring	1
13,14	55320		Screw - Blade retainer to mechanism plate (long) (4), Blade controller plate to mechanism plate (5)	9
13	55321		Screw - Blade retainer to mechanism plate (short)	1
15	56835		Wing - Diaphragm	5
5	58135	*A	Washer - High speed spring lever assembly spacing	1
13	59190		Screw - Case to mechanism plate	2
13	61311	*A	Screw - Mechanism plate to long spacer	1
4	62986	C	Collar - Shutter retaining	1
13	63708		Screw - Mechanism plate to short spacer	1
2	66507	A	Stud - Focus stop	1
7	69954		Screw - Synchro sector	1
4	80502	D	Collar - Shutter retaining	1
5	83470		Screw - Upper retard gear plate to mechanism plate stud	2
11	94313		Sleeve - Inner terminal insulating	1
11	94317		Nut - Terminal	1
11	94318		Washer - Terminal (small)	1
10	102351		Screw - Cable release opening	1
7	102957		Screw - Release lever	1

*Old Style

FIG.	PART NO.	SHUTTERS	PART NAME	REQD
6,11,12	102975		Screw - Lower retard gear plate to mechanism plate (1), Terminal block clamp (1), Setting lever cover to case (5)	7
4,10	102980	C D	Screw - Shutter locating	1
12	104051	A	Setting Lever Cover Assembly	1
2,3,4	104052		Synchro Flash Control Ring Assembly	1
2	104054	*A	Speed and Diaphragm Index Plate Assembly	1
2	105076	A	Ring - Shutter lock	1
2	105082	A	Collar - Shutter retaining	1
8	105462	B	Trigger Assembly	1
15	105464	B	Case Assembly	1
1	105465	B	Shutter Assembly (without lenses)	1
7	105483		Spring - Synchro sector actuating	1
11	107224		Screw - Terminal block	1
2	107806	*A	Screw - Speed and diaphragm index plate	1
2,3,4	107810		Ring - Speed control	1
12	107815		Body - Terminal	1
12	107816	A B	Bushing - Cable release	1
10,15	107818		Screw - Diaphragm indicator ring (3), Diaphragm actuating ring assembly to case (2)	5
10	107819		Ring - Diaphragm indicator	1
7	107820		Spring - Main	1
16	107821		Stud - Main spring	1
6	107828		Spring - Retard pallet (old style)	1
6	107834		No. 1 Gear Assembly	1
5,6	107835		Screw - Contact lever (1), Retard sector (shutter A, old style) (1)	2
6	107836		Spring - Retard sector	1
7	107844		Spring - Release lever latch	1
8	107851		Screw - Trigger	1
8	107852		Spring - Trigger	1
8	107858		Screw - Trigger latch	1
8	107859		Spring - Release lever (new style)	1
8	107860		Spring - Release lever (old style)	1
11	107870		Clamp - Terminal block	1
11	107872		Block - Terminal	1
11	107873		Connector - Long	1
9	107878		Spring - Synchro sector latch	1
9	107881		Pallet - Synchro retard	1
14	107893		Retainer - Blade-controller	1
13	107910		Blade	2
15	107915	*A	Spring - Snubber lever	1
16	107916	A C D	Spacer - Mechanism plate (long) (old style)	1
16	107917		Spacer - Mechanism plate (short)	1
16	107918		Stud - Snubber lever	1
16	107919		Stud - Cover blade	2
1	107925	A	Shutter Assembly (without lenses)	1
2	107926	†A	Speed and Diaphragm Index Plate Assembly	1
6	107931		Retard Pallet Assembly	1
6	107933		No. 2 Gear Assembly	1
6	107934		Retard Sector Assembly (new style)	1
7	107936	*A	Release Lever Assembly	1
8	107939		Trigger Latch Assembly (old style)	1
5	107940		Contact Lever Assembly	1
7	107941		Synchro Sector Assembly	1
9	107942		Synchro Sector Latch Assembly	1
9	107943		Synchro Retard Weight Assembly	1
5	107944		High Speed Spring Lever Assembly	1
13	107945		Blade Assembly (.002 thick)	5

Always give PART NUMBER and NAME when ordering parts

*Old Style – †New Style

FIG.	PART NO.	SHUTTERS	PART NAME	REQD
15	107949		Diaphragm Actuating Ring Assembly	1
15	107950	*A	Snubber Lever Assembly	1
6	116163		Spring - Retard pallet (new style)	1
11	116164		Washer - Terminal (large)	1
15	116166	A C D	Case Assembly	1
8	116168	A	Trigger Assembly - (Shorten cover blade actuating stud as necessary to fit old style shutter)	1
6	116253	*A	Spacer - No. 2 gear assembly	1
8	116438		Spring - Bulb lever	1
6,17	116669		No. 3 Gear Assembly (new style)	1
5,17	116670		Upper Retard Gear Plate Assembly	1
8	117331	A C D	Stud - Shutter release strap	1
11	117925		Inner Terminal Assembly	1
12	120853		Knob - Setting	1
12	120854		Washer - Setting knob	1
6	121046		Screw - Retard sector	1
5	121048		Sleeve - Contact lever bushing	1
8	121175		Trigger Latch Assembly (new style)	1
6	121232		Screw - Lower retard gear plate to mechanism plate	1
13	121394		Retainer - Blade (old style)	1
6	121722		Spring - Back lash (for old style shutters)	1
15	122514		Snubber Lever Assembly	1
13	122518		Screw - Mechanism plate to long spacer	1
16	122519 O.S.	A C D	Spacer - Mechanism plate (long) (Intermediate style)	1
16	122519 N.S.		Spacer - Mechanism plate (long) (new style)	1
15	122647		Spring - Snubber	1
13	122677		Retainer - Blade (new style)	1
4	122864	C D	Plate - Speed and diaphragm index	1
13	123014		Blade Assembly (.003 thick)	1
1	123043	C D	Shutter Assembly (without lenses)	1
9	123127		Screw - Synchro retard weight assembly	1
4	123352	C D	Washer - Shutter spacing	1
9,15	123658		Screw - Synchro retard pallet (1), Snubber lever (1)	2
12	123982	C D	Bushing - Cable release	1
7	124067		Release Lever Assembly	1
8	124112	A D	Trigger Assembly	1
3	125217	B	Plate - Speed and diaphragm index	1
13	127811		Mechanism Plate and Blade Controller Assembly	1
17	127872		Kit Assembly (for replacing upper and lower retard gear plates and old style No. 3 pinion assembly)	1
10	131821	B	Screw - Shutter locating	1
12	133302	C D	Setting Lever Cover Assembly	1
12	133365	B	Setting Lever Cover Assembly	1
2	HE800010	A	Front, Center and Rear Lens Assembly	1
2	HE800014	A	Focusing Mount Assembly	1
4	HE803700	C D	Front and Rear Lens Assembly	1
3	HE803760	B	Front and Rear Lens Assembly	1
4	HE803766	C D	Cap - Lens	1
3	HE803767	B	Insert - Adapter ring	1

*Old Style

6-55-GLP-B

Lithographed in the United States of America

Kodak

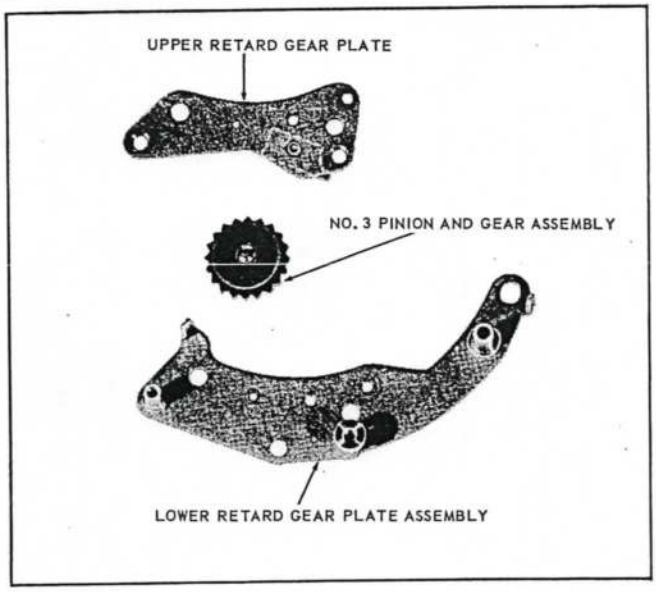
Service Instructions

November 1953 No. 6201-A

KODAK SYNCHRO-RAPID 800 SHUTTER

1. Erratic Speed at 1/200 Second
2. Insulated Cable Release Socket

1. In early shutters, considerable speed variation between repeated actuations at the 1/200 speed may be traceable to backlash in the No. 3 pinion and gear assembly. To reduce this backlash, the No. 3 pinion and gear assembly and the upper retard gear plate have been fitted in production with small permanent magnets. When adjusting shutters which have this improvement, test the 1/200 speed several times. If there is undue variation, changing the relative position of the two magnets may be required. To do this, remove the upper retard gear plate and turn the No. 3 pinion and gear assembly 90 degrees and reassemble the shutter. This will increase the attraction or repulsion of the magnetic fields, taking up the backlash. The direction (clockwise or counterclockwise) in which the backlash is eliminated is unimportant. Earlier shutters which do not have magnets can be modified if necessary by installing Part No. 127872–Replacement Kit for Upper and Lower Retard Gear Plates and the No. 3 Pinion and Gear Assembly. Shutter speeds other than 1/200 second will not be affected.



2. When using this shutter with a metal cable release and a flasholder with a metal battery case, shorting of the batteries can occur when connected in a certain manner, if the cable release touches the battery case. To eliminate this possibility, nylon cable release sockets and nylon bushings for the trigger assembly, at the point contacted by the cable release plunger, were developed to electrically insulate the metal cable release from the shutter. This change is incorporated in current production. To make this change, the following parts are required:

New Part	Replaces	
No. 124112	No. 116168	Trigger Assembly
No. 124113	No. 104051	Setting Lever Cover Assembly
No. 123982	———	Nylon Bushing for Cover Assembly

Bushing, Part No. 123982 (cable release socket) is not staked to cover assembly. It is held in place between the cover and the shutter case.

EASTMAN KODAK COMPANY

Rochester 4, New York

Lithographed in the United States of America

S. M. No. 1-5250

SERVICING INSTRUCTIONS FOR THE

KODAK SYNCHRO-RAPID 800 SHUTTER

EASTMAN KODAK COMPANY • Rochester, N. Y.

Servicing The
KODAK SYNCHRO-RAPID 800 SHUTTER

The Kodak Synchro-Rapid 800 Shutter is a new-type shutter which utilizes an entirely different blade action from any previous shutter. Since the action is different, a brief outline of the working principles is given here.

When the shutter is cocked, tension is applied to the main spring for operating the shutter blades. Speed is controlled by the amount of retard gear train action as determined by the position of the retard sector. At the 1/400-second speed the gear train has no retarding action and at the 1/800-second speed, a high-speed spring is utilized as an auxiliary source of power.

Cocking the shutter also applies a spring load to the synchro sector which tends to rotate the part counterclockwise. Movement is prevented, however, by the end of the release lever which engages the flat surface of the synchro sector. When the trigger is pressed, the synchro sector is released allowing the sector to make contact with the arm of the contact lever. Blade action, however, does not begin at once since the blade controller is still held by the release lever latch. The synchro sector rotates, maintaining electrical contact, and through a camming action moves the end of the release lever toward the center of the shutter until the release lever latch releases the blade controller and the blade action begins. The length of the interval between the electrical contact and the start of the blade action is the millisecond delay of the shutter. This delay is controlled by the position of the contact lever which can be changed by moving the synchro control ring.

While many of the problems involved in making repairs are common to other shutters, the working tolerances of the "800" shutter are extremely small and adjustment is exceptionally critical. For this reason, repair of the shutter should not be attempted unless adequate testing equipment is available. Such equipment should include a means of checking speeds, synchronization, and flash contact. To make these tests satisfactorily, a checker such as the General Electric Time Interval Meter, the Heiland Synch Checker, or some similar electronic device must be used. Satisfactory repair cannot be made without such testing equipment.

This manual has been prepared as a guide for the experienced shutter repair man. While it includes complete disassembly and reassembly, it is expected that the repair man will dismantle only those parts necessary to make the repair.

For example: To clean or replace cover blades, disassemble in this sequence.

1. Figures 1 through 8.
2. Remove trigger spring shown in figure 63 and the retard sector and spring, figures 13 and 14.
3. Figures 16, 27, 30 through 35.
4. Remove terminal nut (holds long connector to terminal assembly).
5. Lift out the end of the long connector at the terminal assembly. Be careful not to change the forming of the connector.
6. Figure 36.
7. Cock the shutter.
8. Pull gently on the long connector to make it clear the shutter case; then raise the mechanism plate on the side opposite the set lever until the set lever clears the slot in the set lever cover.
9. Clean or replace blades, figure 43.

Too much stress cannot be laid upon the importance of proper lubrication with the correct lubricant. Two lubricants, Molykote grease and Texaco Unitemp grease, are used on the shutter. The Molykote grease is very unstable and must be thoroughly stirred before using. When applying the lubricants, use a very small amount. Too much lubrication will retard shutter action; too little may cause scoring of the working parts.

GENERAL SPECIFICATIONS

Speed Tolerance (Same as ASA Tolerances) –
1 second to 1/200 second ± 20%
1/200 second to 1/800 second ± 30%

Synchro Time Delay –
M setting 14 to 17 milliseconds
F setting 3 to 4½ milliseconds
Maximum (one dot beyond M) 18 to 24 milliseconds
Minimum (one dot beyond F) 2 milliseconds

Contact Efficiency –
75% Minimum
(Contacts must be closed for at least 75% of the time during the first 2½ milliseconds after contacts first touch)

Lubrication –
Two lubricants are used on the shutter and it is very essential that these lubricants be applied to the right

.T.M. Reg. U.S. Pat. Off.

places and in the correct amounts. Molykote lubricant should be applied:

1. On the end of the release lever where it engages the synchro sector
2. On the inside and outside diameters of the blade controller
3. On the latching surface of the release lever latch where it engages the release lever lock stud

Molykote should be thoroughly mixed before using since it tends to separate when standing. Apply sparingly to the points indicated, leaving a very thin film on the surface without a surplus around the edges. If too much lubricant is used, it will transfer to the shutter blades and cause a slowing up of shutter speeds.

Texaco Unitemp grease is used on all other parts of the shutter where lubrication is required. Use only a thin film and wipe off any excess. These points are:

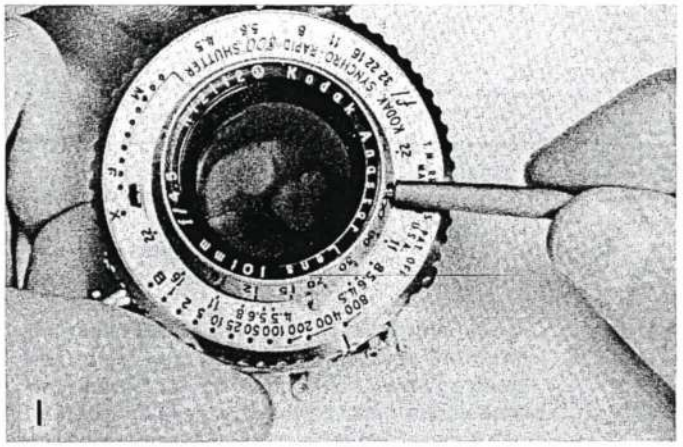
1. Outside diameter of index plate
2. Top of shutter case where speed ring bears
3. Tail of retard sector
4. Inside diameter of speed control ring
5. Inside diameter of synchro control ring
6. Inside diameter of diaphragm control ring
7. Stud on blade controller which engages high speed spring
8. Studs for release lever, synchro sector, synchro escapement wheel, and retard sector
9. Trigger where it engages trigger latch and synchro sector latch
10. Snubber lever where stud on blade controller contacts (old-style snubber only)

SERVICE TROUBLES AND REMEDIES

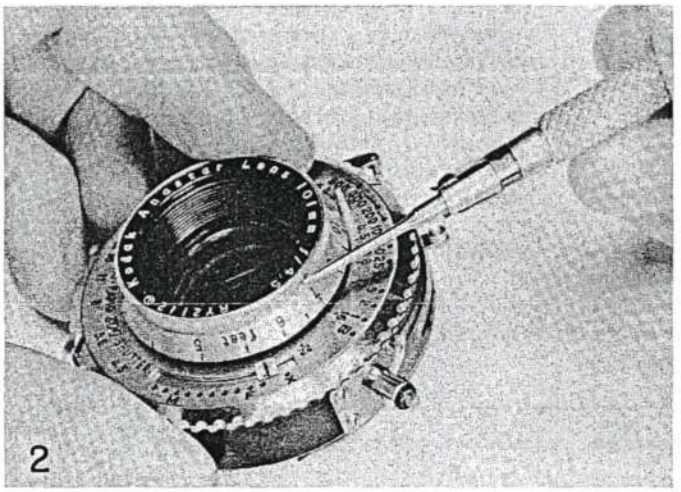
TROUBLE	PROBABLE CAUSE	REMEDY
BLADE ACTION		
Blade action very sluggish. Gummy deposit on blades.	Excessive Molykote has transferred onto blades.	Disassemble the shutter and remove the blades. Clean the mechanism plate and retainer plates. Lubricate the blade controller with a thin film of Molykote. Replace the blades and reassemble the shutter.
Blades buckled (split at tip of one or more blades).	Blades crossed while closing.	Replace the blades. Check each blade for flatness when reassembling and straighten if necessary.
Blades stay open on retard speeds (especially ½, 1 second).	Bind in cover blades.	Check cover blades for nick on edge of back side. Replace if necessary. Due to diaphragm indicator ring disengaged from stud on diaphragm control ring which extends through slot in back of mechanism case. Re-engage stud in hole.
	Mechanism plate bent.	Check for flatness. Replace if necessary.
	Retard pallet adjustment allows too much drag.	Readjust.
	Nickel plating on retard pallet or escapement wheel blistered.	Replace with new pallet assembly and parkerized (black) escapement wheel.
	Scoring of mechanism plate hub by inside diameter of blade controller.	Burnish out roughness on both parts. Use proper amount of Molykote lubricant and reassemble.
Blades do not open or close all the way. Action of blades is free.	Screw for blade controller retainer plate has loosened and backed off. Blade is catching on screw head.	Dismantle and tighten all screws securely.

TROUBLE	PROBABLE CAUSE	REMEDY
Blades bound. One blade out of position (pattern irregular).	Blade stud pulled out of blade.	Replace blade.
	Section of blade broken out around blade rivet.	Replace blade.
Cover blades close before shutter blades on retard speeds.	Lug on trigger latch fractured.	Replace trigger latch (if old-style trigger latch is removed, old-style must be used to replace).
	Trigger latch stud loose.	Replace mechanism plate.
GENERAL ACTION		
Shutter will not hold cocked position.	Handle of blade controller fractured or bent.	Replace blade controller.
	Release lever not returning completely when cocking, due to mechanism plate being bent.	Replace mechanism plate if necessary.
Shutter will not trip when cocked especially on 1/800.	Slots of blade controller peened by blade studs to create hollow spot in slot.	Replace blade controller.
	Sticking or friction between release lever lock stud (on handle of blade controller) and release lever latch.	Stone surfaces smooth and relubricate. Adjust as per instructions. Replace parts if necessary.
1/800 speed checks same as 1/400.	High-speed spring broken.	Replace.
Shutter jammed.	Broken part lodged in mechanism.	Check for broken parts, such as trigger latch, high-speed spring, or mechanism plate stud. Replace as necessary.
All retard speeds fast.	No retard action by gear train due to dirt or parts not working freely.	Correct binds of retard sector or gear train components. Clean parts if necessary.
	Gear and pinion assembly not riveted tightly.	Restake or replace assembly.
	Stud on blade controller which operates retard sector is broken loose.	Replace stud.
Cocking action rough.	Snubber lever roughened by stud on blade.	Replace snubber lever (lubricate as per instructions).
Instantaneous exposure on bulb setting or bulb exposure on instantaneous setting.	Adjustment of bulb lever not correct.	Readjust.
Diaphragm out of round.	One diaphragm wing out of engagement with slot in bottom of shutter case.	Dismantle, replace diaphragm wing and reassemble.

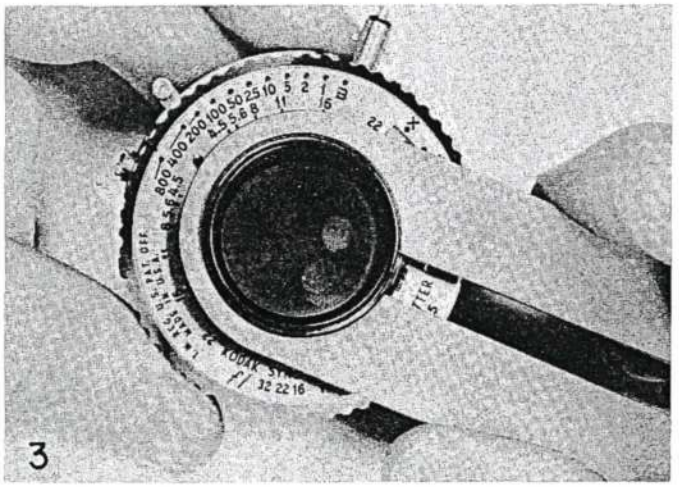
TROUBLE	PROBABLE CAUSE	REMEDY
ELECTRICAL		
Flash bulb fires when loading.	Electrical short.	Check for any foreign matter between the insulated parts of the circuit (i.e. long connector, short connector, contact lever) and make sure none of these parts is in contact with case, mechanism plate or other metal parts. If short occurs when shutter is set for maximum milliseconds (one dot beyond "M" setting), spacing of contact points is probably too close and should be readjusted to increase spacing (see instructions). Be sure that short connector coils do not touch either the case or the contact lever bushing, and that insulating sleeve is used over contact lever bushing. Check for short between body terminal and center plunger of terminal assembly. If short occurs only when setting the shutter, check for end of long connector touching the handle of blade controller.
Shutter will not fire flash bulb.	Contact efficiency not satisfactory (check with proper equipment).	Readjust as per instructions.
	Open circuit where short connector is soldered to adjusting screw of contact lever assembly.	Resolder.
No contact with speed-lamp outfit.	Adjustment of tip of long connector not correct.	Readjust per instructions.



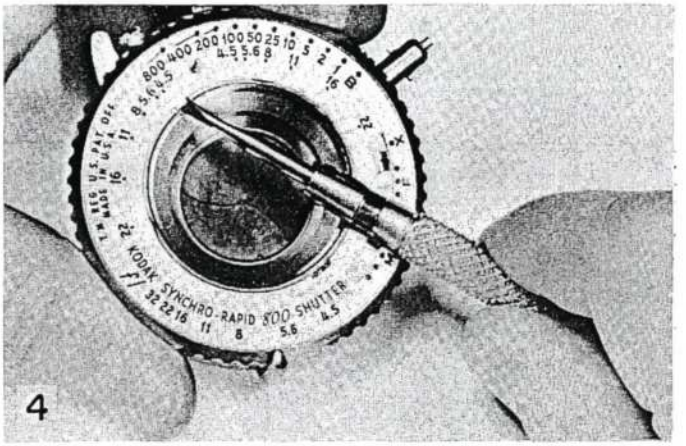
1. Remove the focus mount stop screw with tool No. RF410.



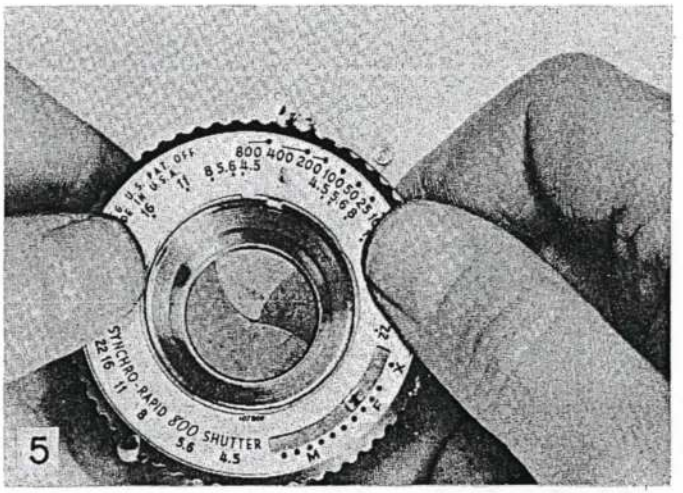
2. Loosen the two focus mount assembly screws and remove the focus mount assembly.



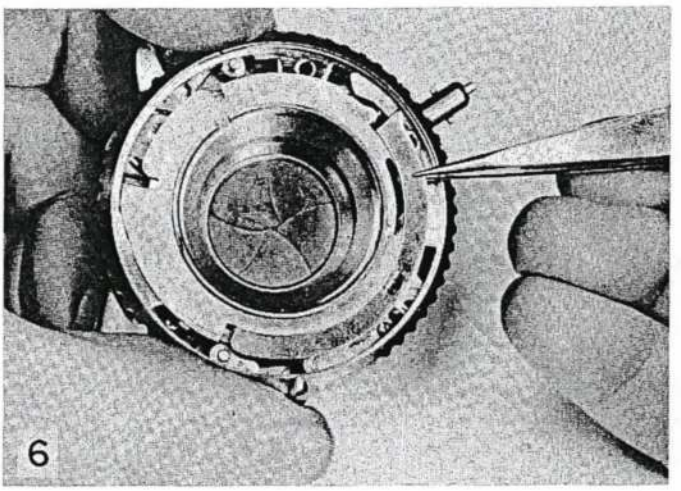
3. Use tool RF717. Remove center and front lens. As a guide for reassembly, if taking front lens from center lens, scribe a mark just as they are separated. Do not separate lens unless necessary for cleaning.



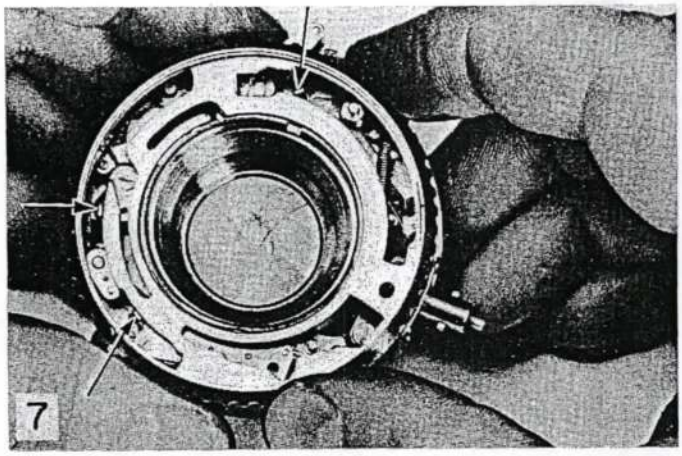
4. Raise the tab on the index plate assembly and twist the screwdriver to the left.



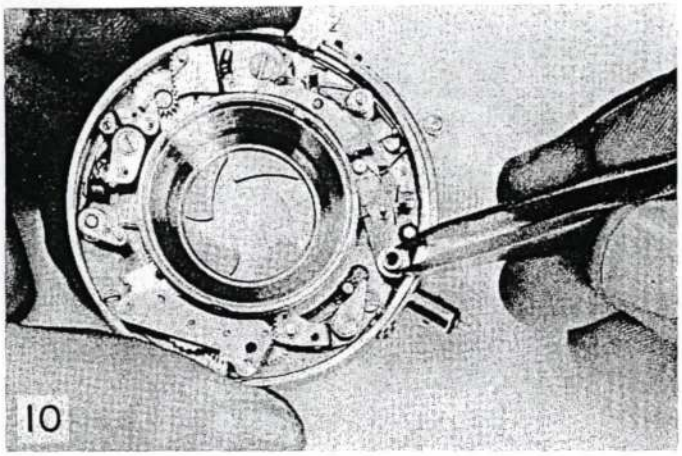
5. Turn the index plate counterclockwise. Shows location of tab when index plate is in position to be removed.



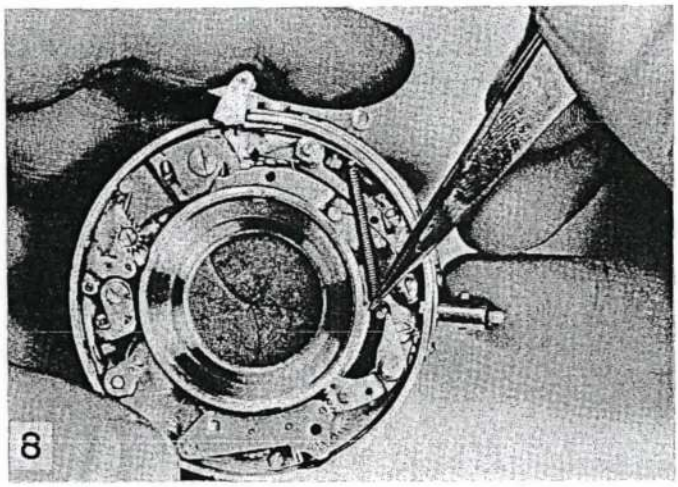
6. Lift off synchro flash control ring.



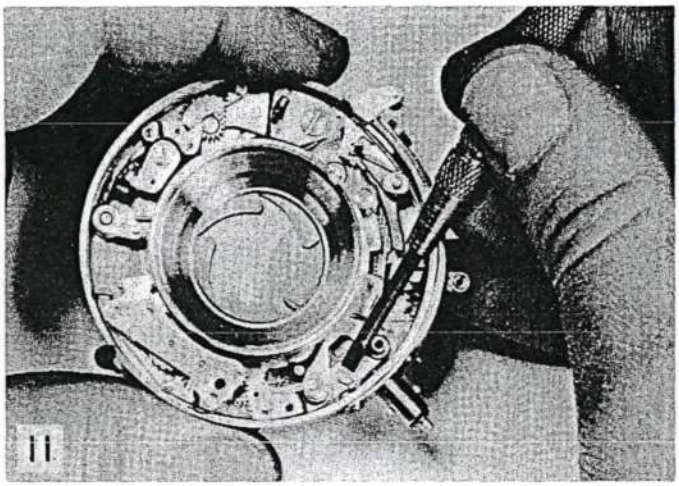
7. Remove the speed control ring. Note position of lugs for reassembly (arrows).



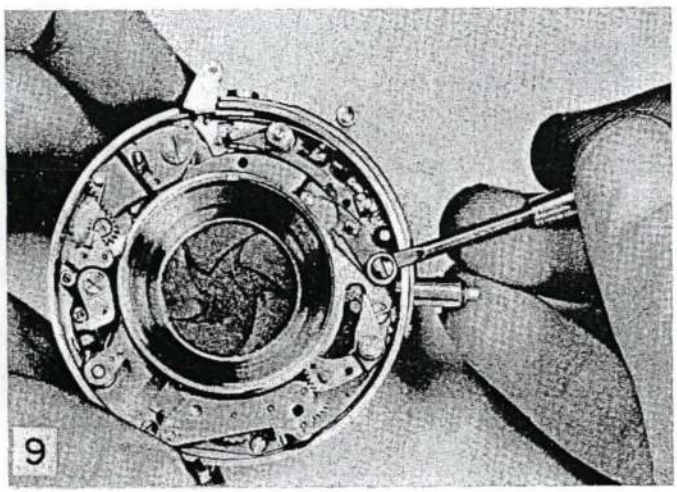
10. Lift out the release lever assembly and the release lever spring.



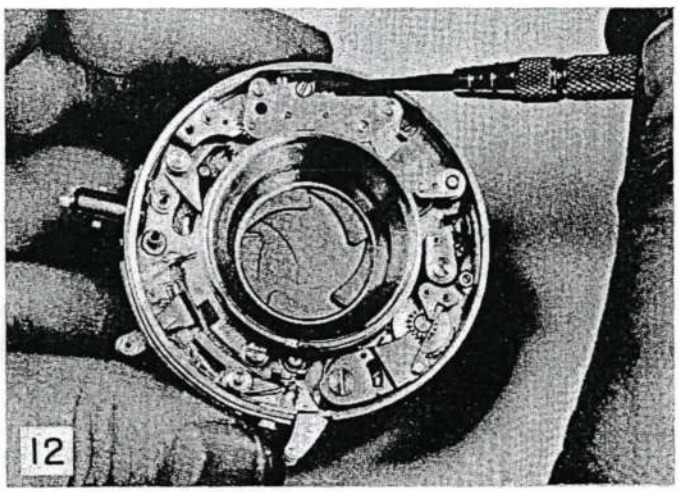
8. Remove the main spring from the two studs.



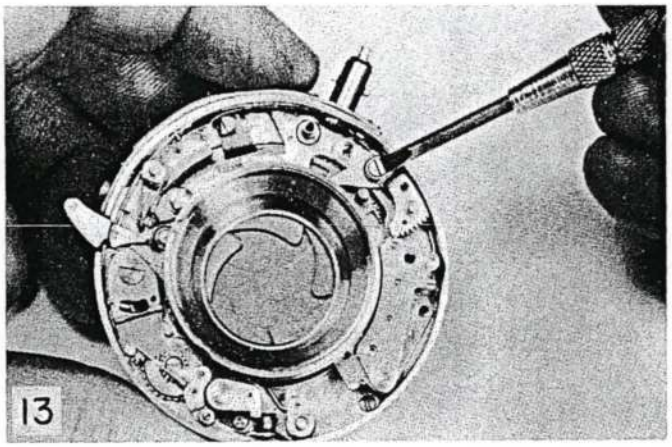
11. Remove the gear plate clamping screw.



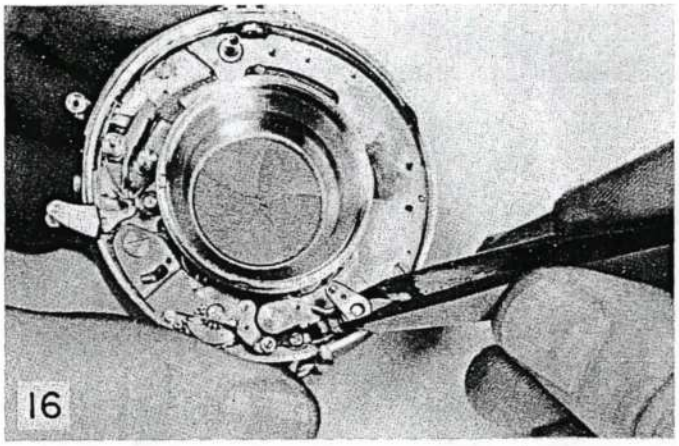
9. Remove the release lever screw.



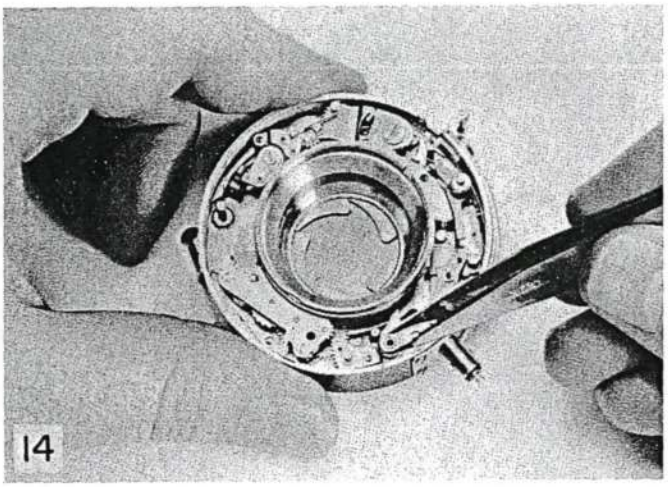
12. Remove the gear plate pivot screw.



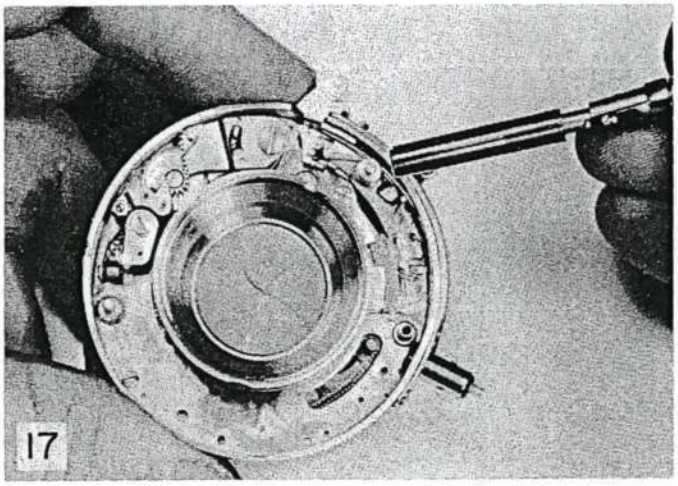
13. Remove the retard sector screw.



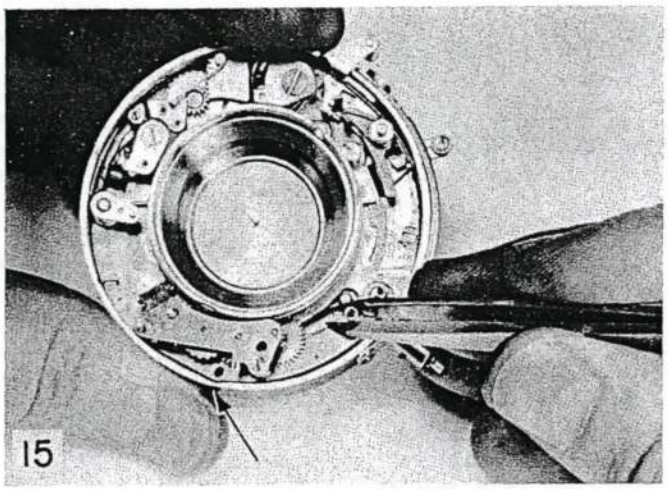
16. Lift out high speed spring lever assembly.



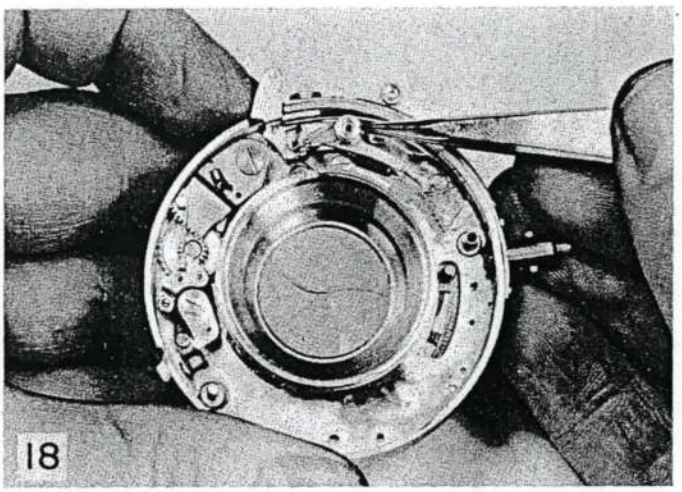
14. Lift out the retard sector and spring.



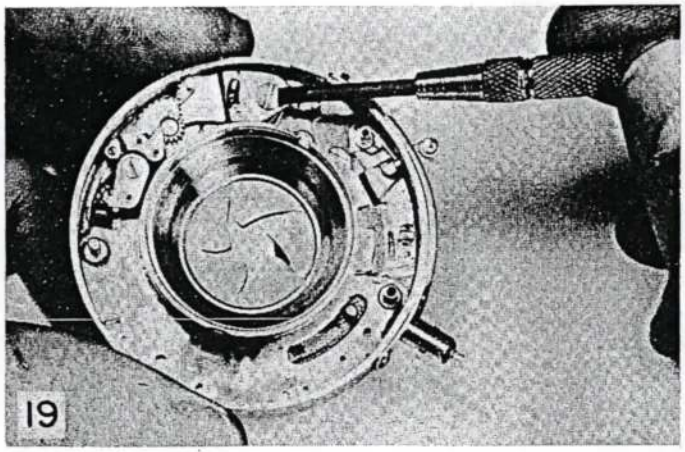
17. Use tool RF611 to remove the trigger screw.



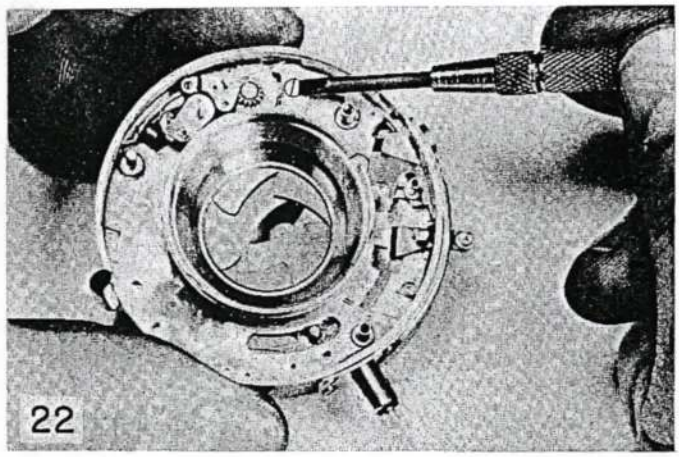
15. Lift out the gear train assembly. Slide counterclockwise until hump on lower plate is opposite cutout (arrow). Realign for reassembly.



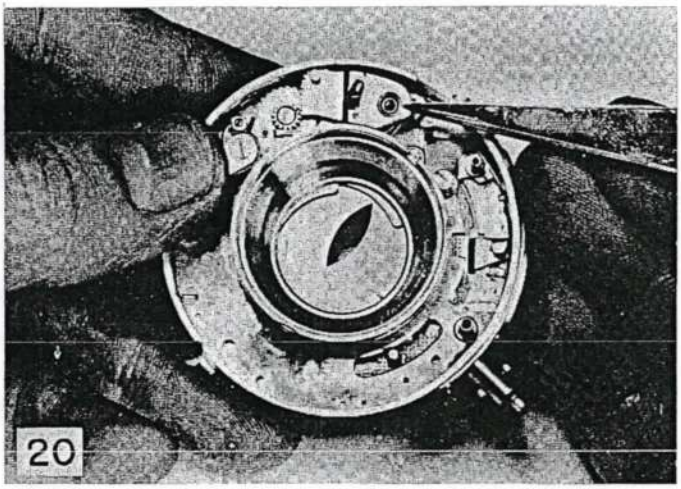
18. Lift out trigger assembly. Includes trigger spring and bulb lever spring.



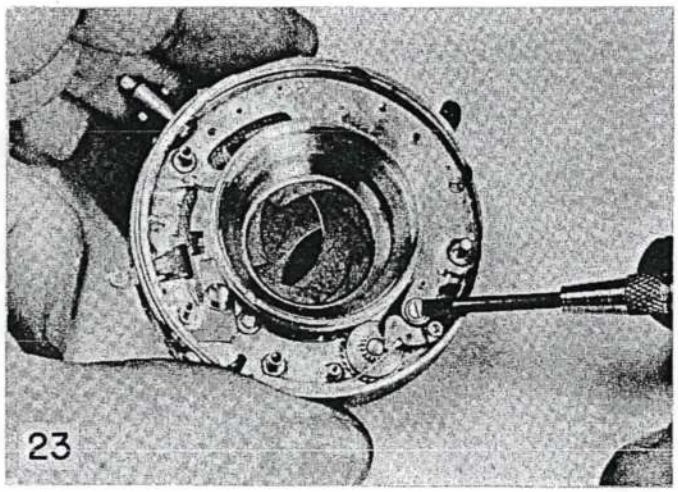
19. Remove screw from synchro sector assembly.



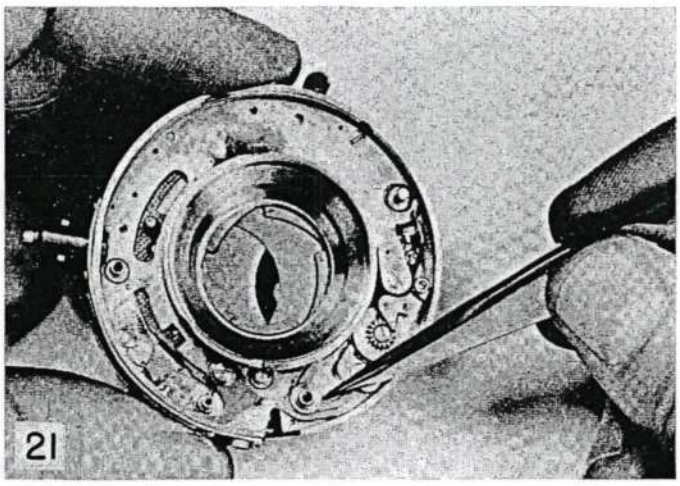
22. Remove synchro retard pallet screw and synchro retard pallet.



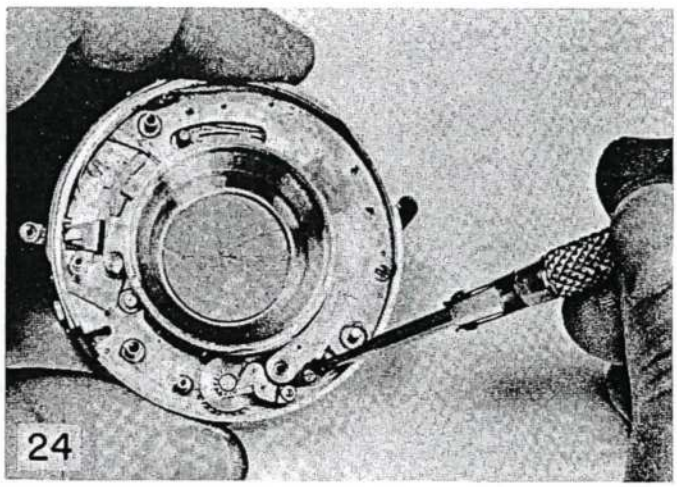
20. Hold the contact lever assembly out of the way and remove synchro sector and spring.



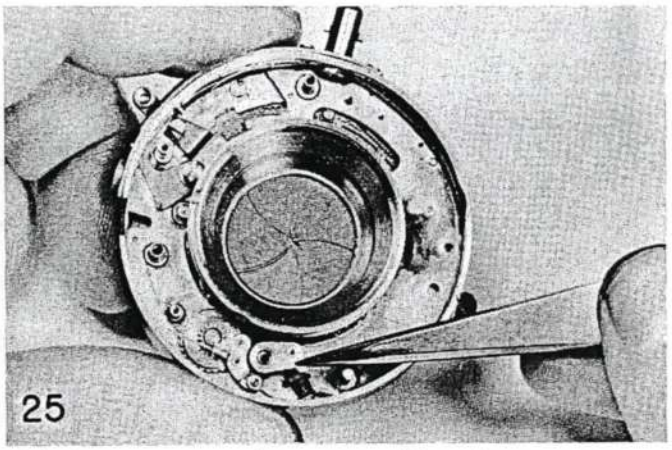
23. Remove contact lever assembly screw.



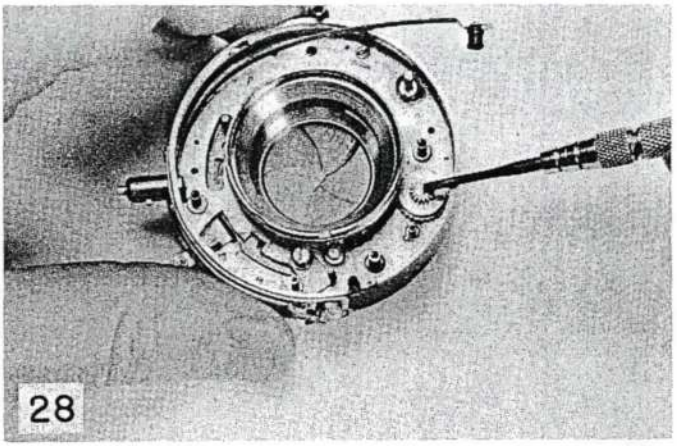
21. Lift out synchro sector latch assembly and spring.



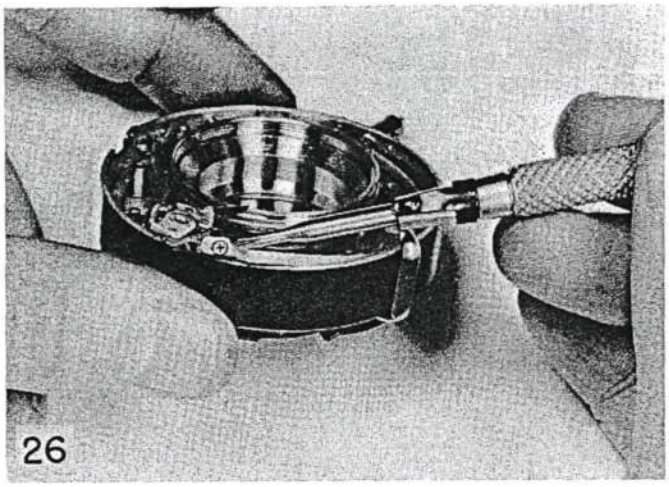
24. Remove clamp screw and clamp. Use tool RF681.



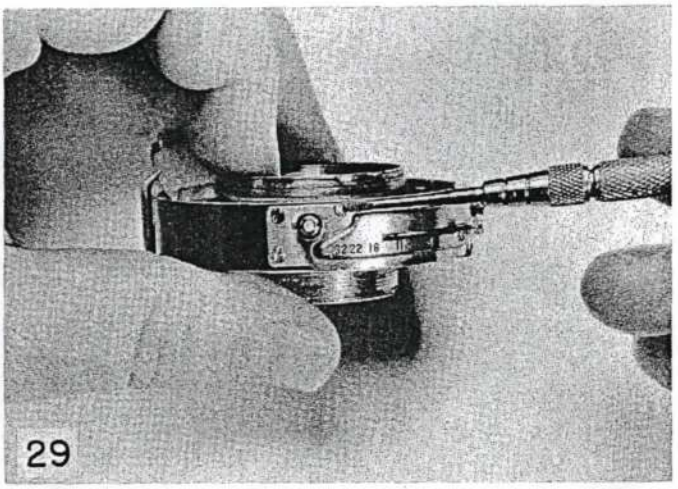
25. Lift out contact lever assembly. (Contact lever is still attached to end of long connector.)



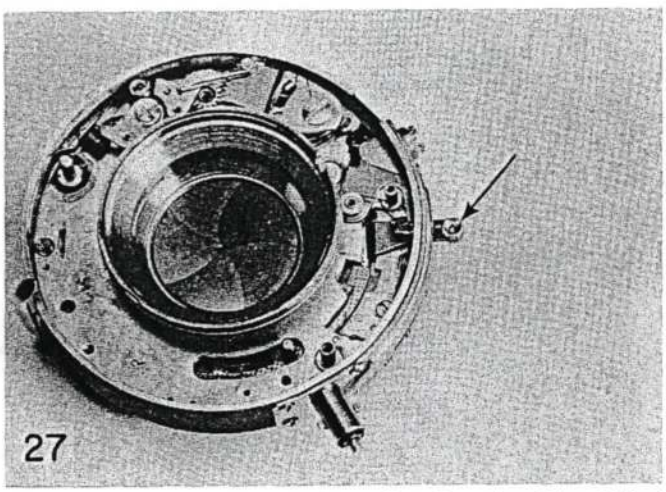
28. Remove screw and synchro retard weight.



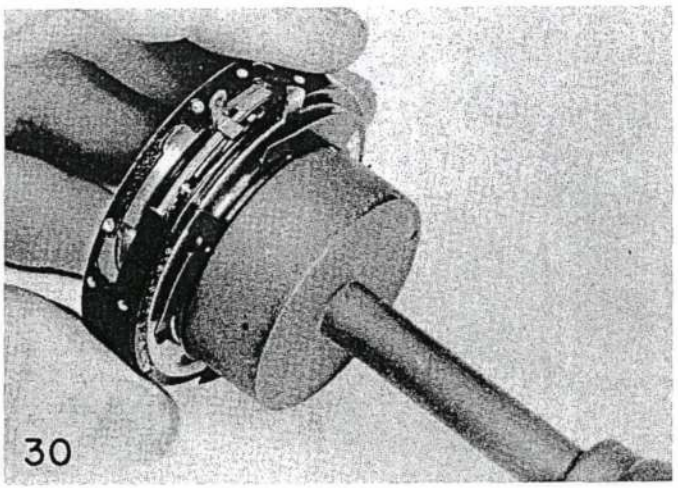
26. Loosen block screw one turn (tool RF681) to remove contact lever assembly from long connector. Short connector will slip from beneath screw.



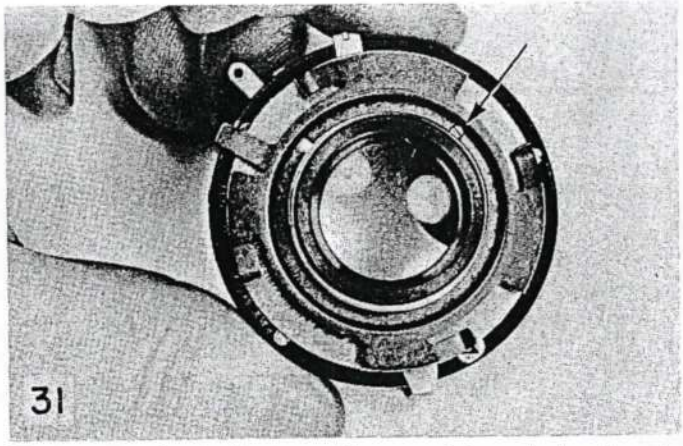
29. Remove five screws from setting lever cover assembly and remove the cover with long connector attached. See figure 4 in parts list for further breakdown.



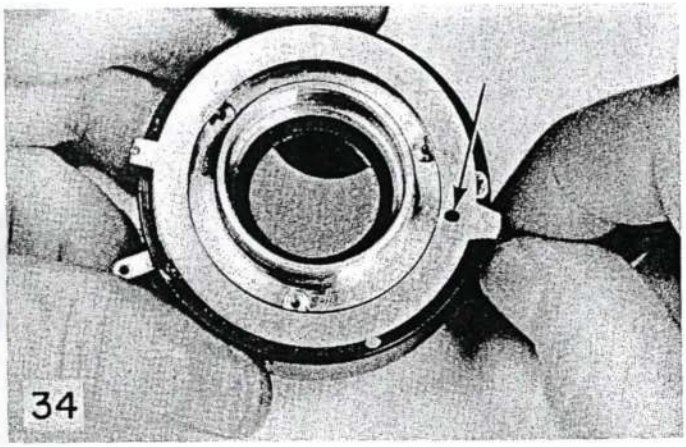
27. Drill to remove knob and washer from handle of blade controller.



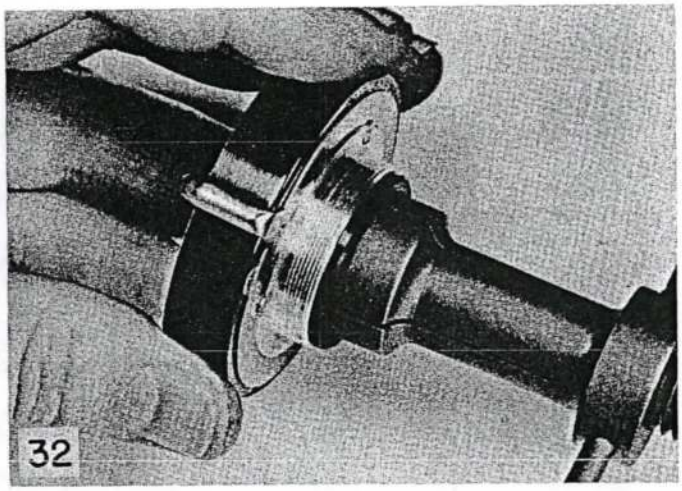
30. Remove the retaining collar with tool RF505A.



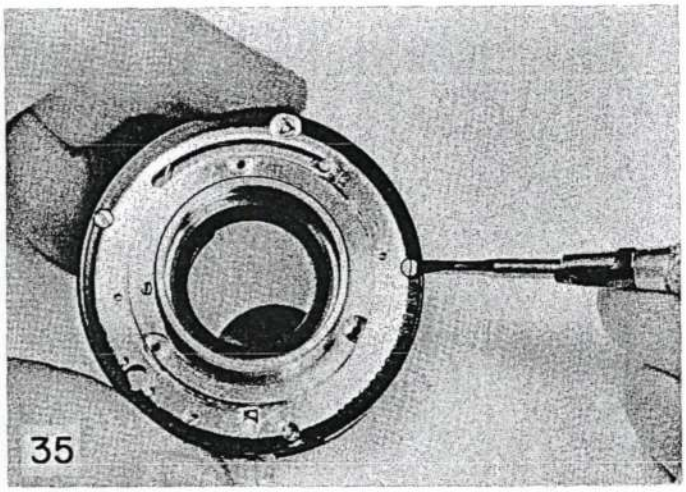
31. Remove the lock ring. Note position of ring in relation to locating screw (arrow) for reassembly.



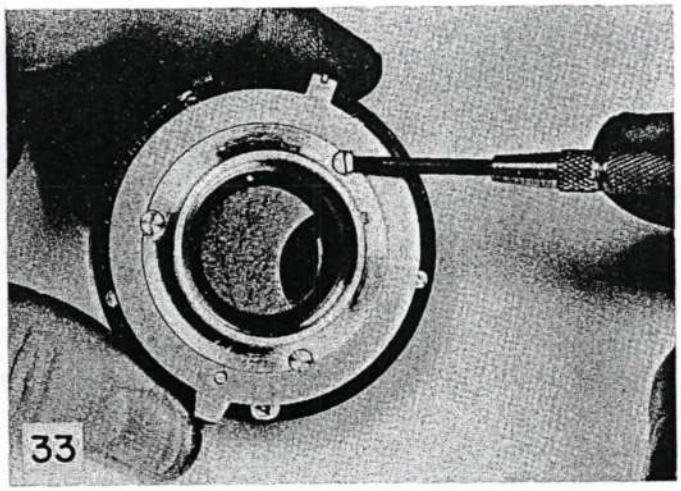
34. Lift off diaphragm indicator ring. When replacing, engage hole (arrow) with stud on diaphragm control ring.



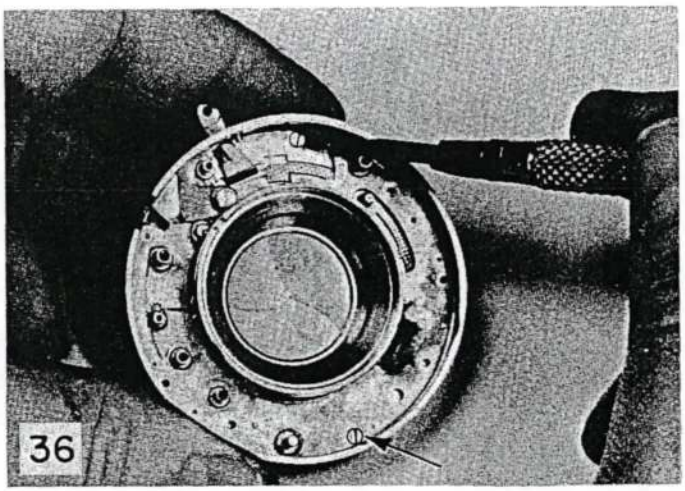
32. With tools RF84 and RF311A remove the rear lens assembly.



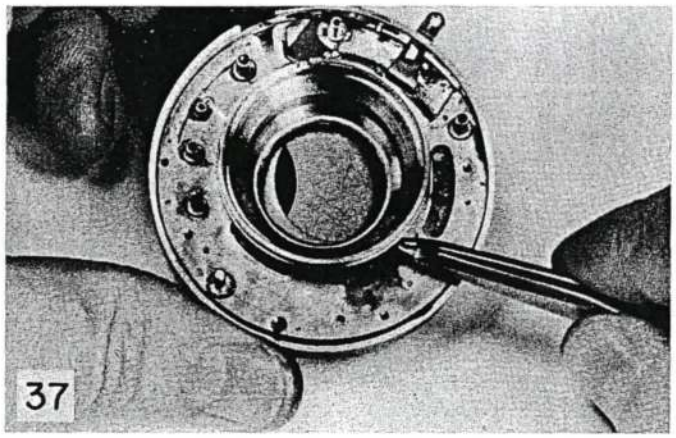
35. Remove two case-to-mechanism plate screws.



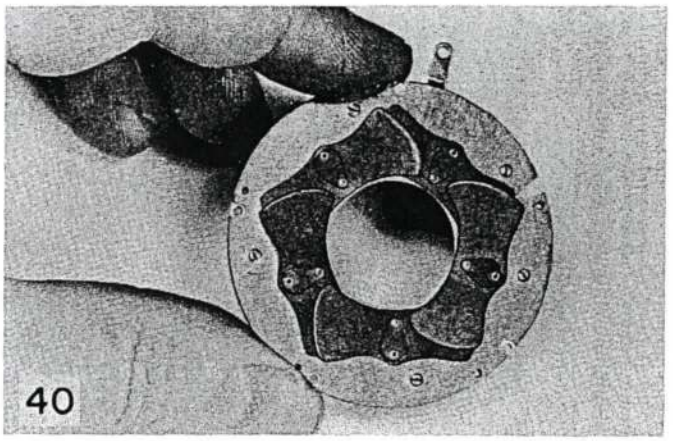
33. Remove three diaphragm indicator ring screws.



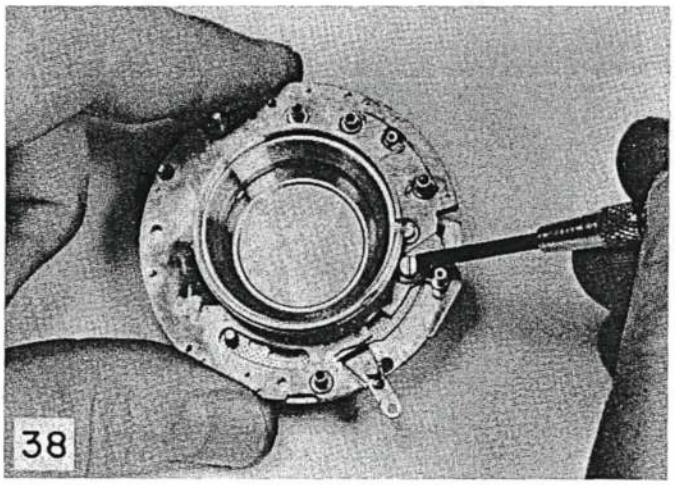
36. Remove screw for short spacer (arrow) and screw for long spacer.



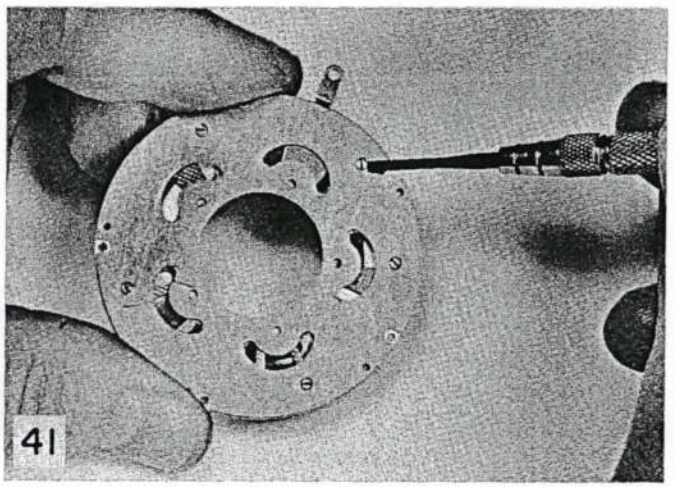
37. Lift out mechanism plate assembly.



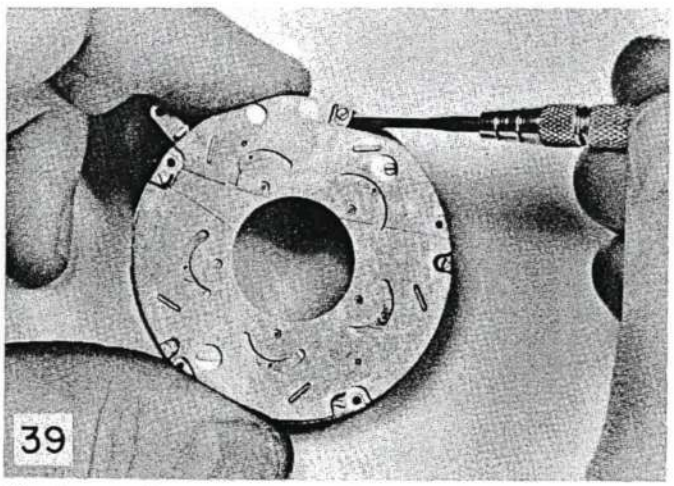
40. Shows blades in position on plate. Before removing blades, number blades and plate so that they can be replaced in the same position. Tip plate upside down to remove.



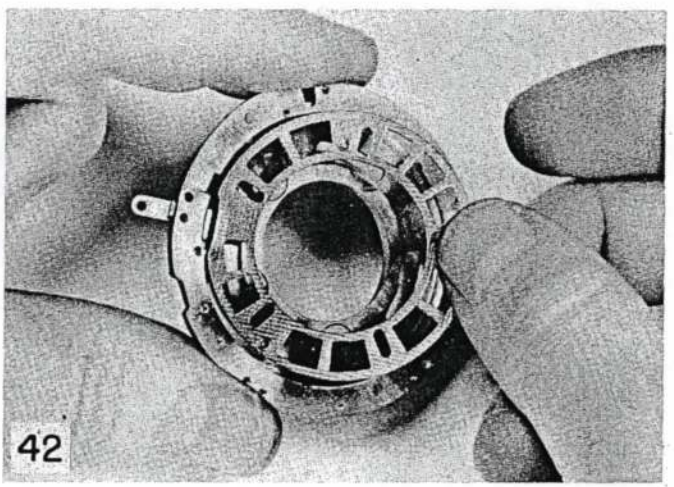
38. Remove screw and trigger latch assembly.



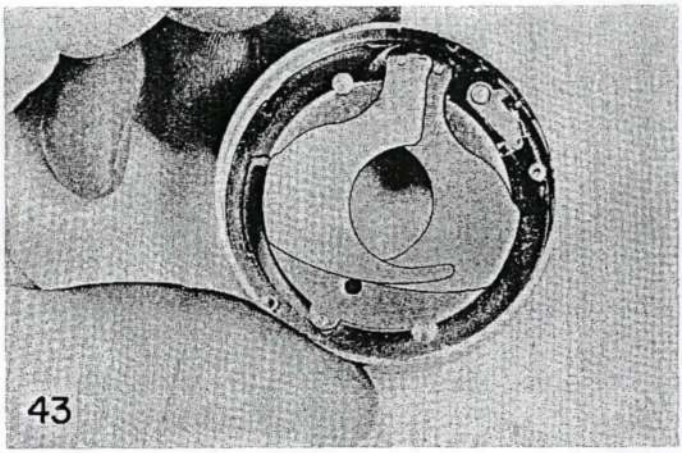
41. Remove five screws and blade controller retainer plate.



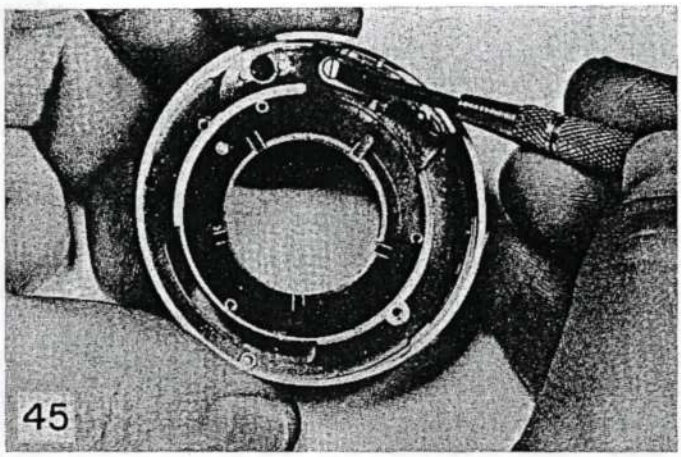
39. Remove five screws and blade retainer plate.



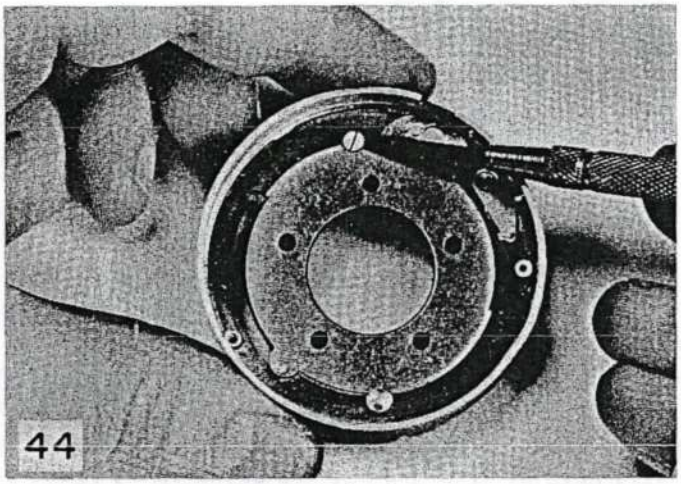
42. Remove blade controller assembly. Withdraw handle through the square hole in the mechanism plate.



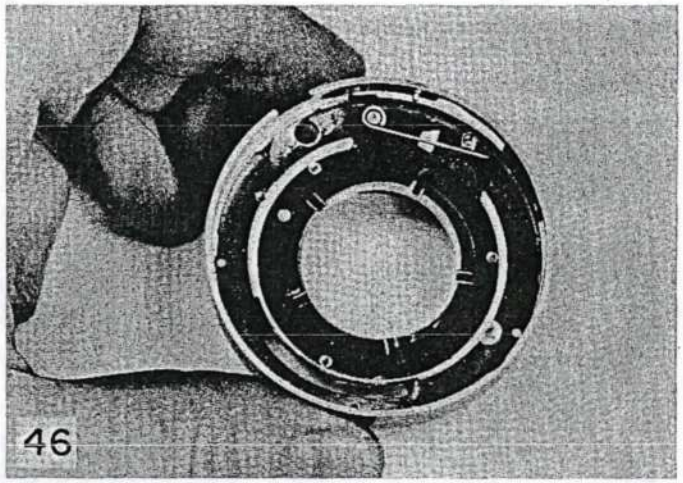
43. Remove two cover blades. Cover blade near snubber to be assembled first.



45. Remove screw and snubber assembly.



44. Remove two screws and diaphragm actuating ring assembly.



46. Shows location of snubber spring.

REASSEMBLY AND ADJUSTMENT

Numbers in parenthesis are picture numbers in the disassembly section

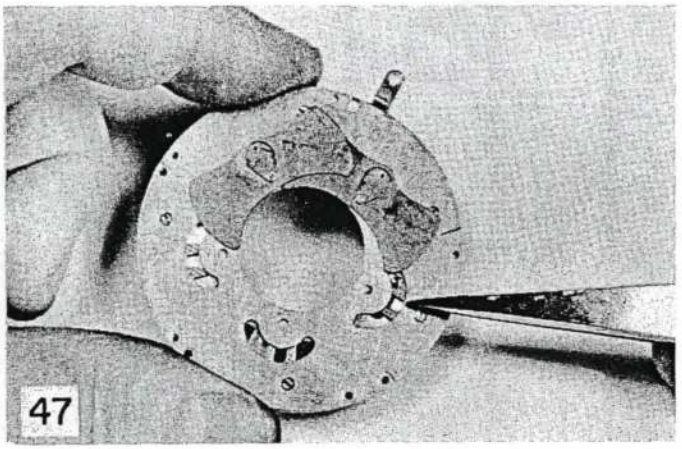
1. Reassemble (46) and (45).

2. Position the five diaphragm wings on the diaphragm actuating ring in a circle with the wings about one-half open. Place the diaphragm actuating ring assembly in the recess of the case so that the embossings on the wings fit into the five slots of the case. Rotate the actuating ring assembly to be sure that the diaphragm operates correctly and freely. Hold the ring in position and replace the two screws (44).

3. Reassemble (43). Check blades for flatness. Be sure that blades are reassembled as shown.

4. Lubricate the inside and outside diameter of the blade controller. Use special Molykote lubricant; stir well. ***Apply a very thin film.*** (42). Blade controller center bearing must fit over hub on mechanism plate within .001-inch maximum play.

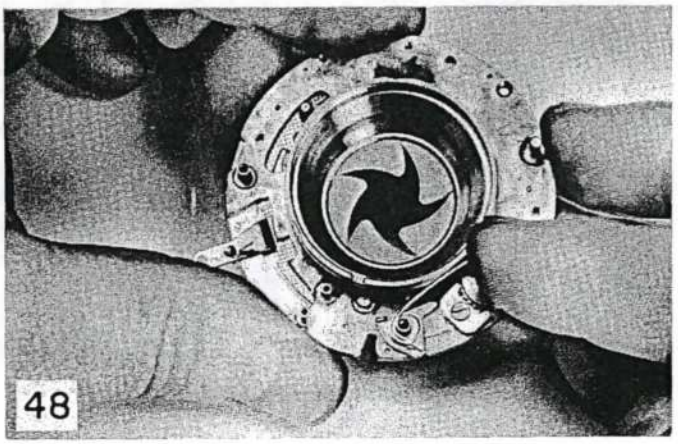
5. Reassemble (41). After replacing screws be sure that no burrs from the screws extend above the surface of the plate. This surface must be smooth and flat.



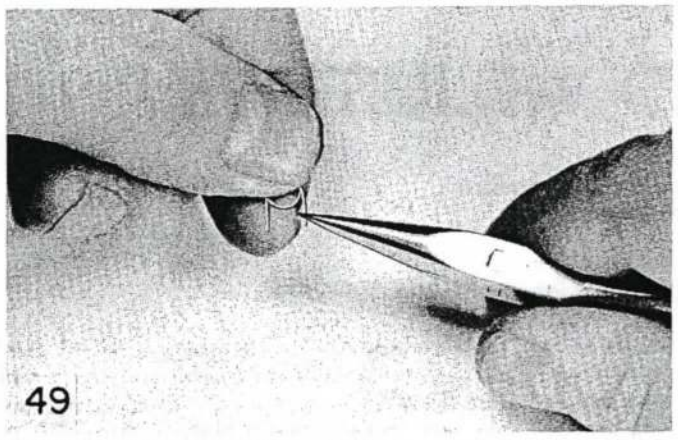
6. Figure 47 - Shows position of blades and slots in blade controller. Reassemble in same order as indicated by numbers put on during disassembly. Be sure that blades are dry and clean.

7. Reassemble (39). Be sure that the one short screw goes in the set lever handle cutout.

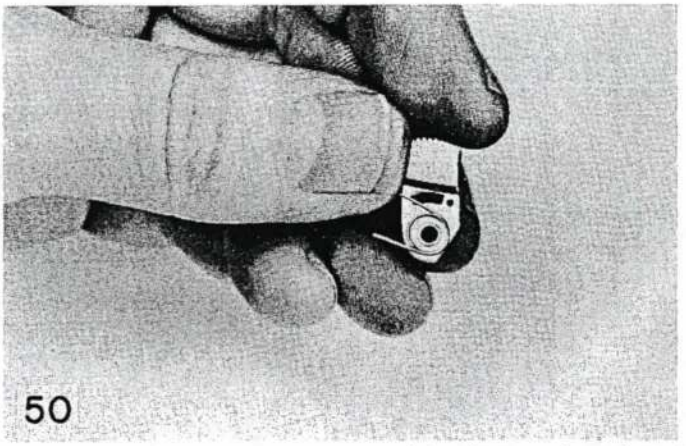
8. Reassemble (38).



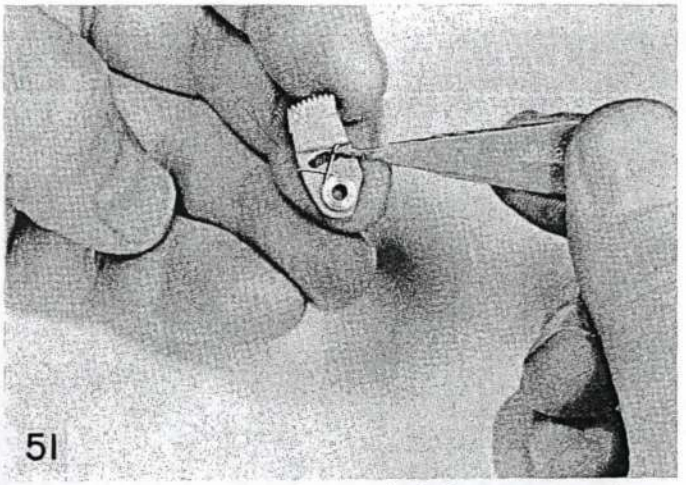
9. Figure 48 - Reassemble synchro retard weight assembly (28), synchro pallet (22), synchro sector latch assembly with spring (21). Place the end of the synchro sector latch spring in groove of mechanism plate.



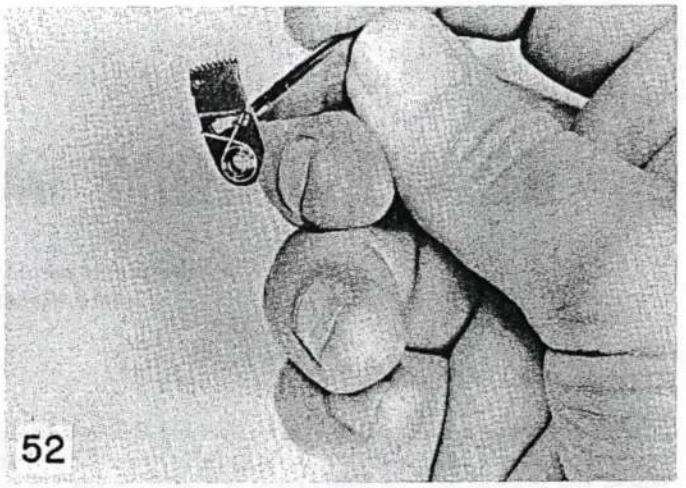
10. Figure 49 - Form the end of the synchro sector spring as shown. The shape of the formed spring can be seen in figure 9 of parts list No. 1-5250.



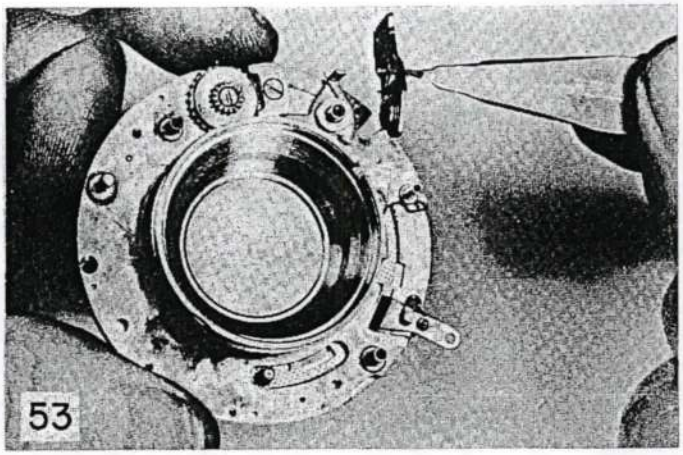
11. Figure 50 - Position spring with hook over the edge of the sector.



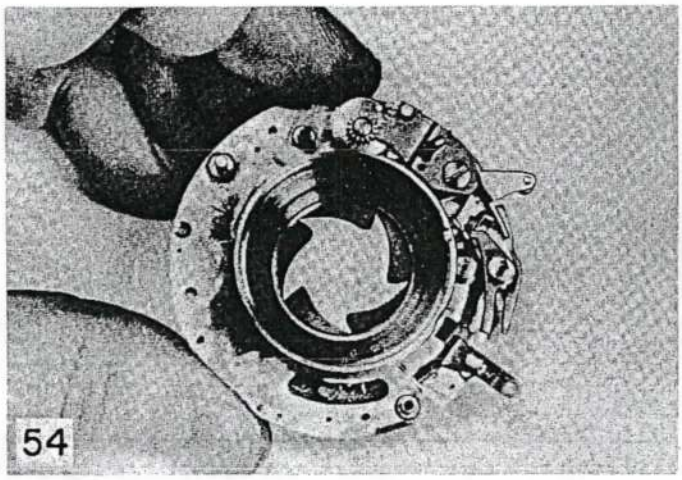
12. Figure 51 - Pull the free end of the spring to the position shown. Hold it in this position with the thumb.



13. Figure 52 - Put one jaw of tweezer through round hole and other jaw through oblong opening and over spring. Hold in this manner to place on stud.

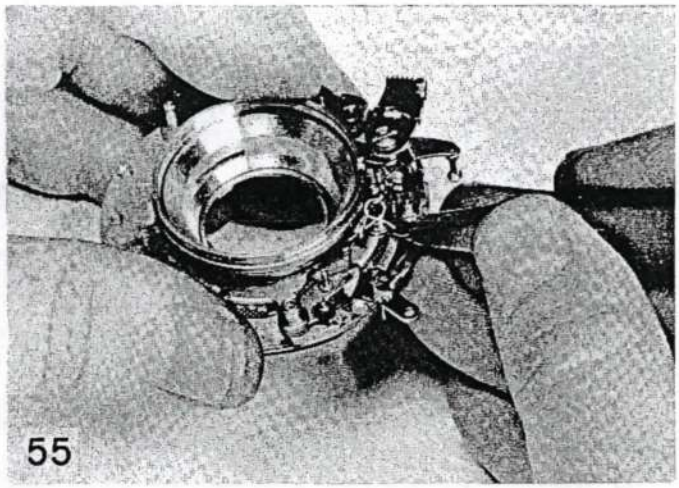


14. Figure 53 - Place on stud with oblong opening over lug of synchro sector latch. When positioned correctly, spring tension is transferred to lug. Replace screw.

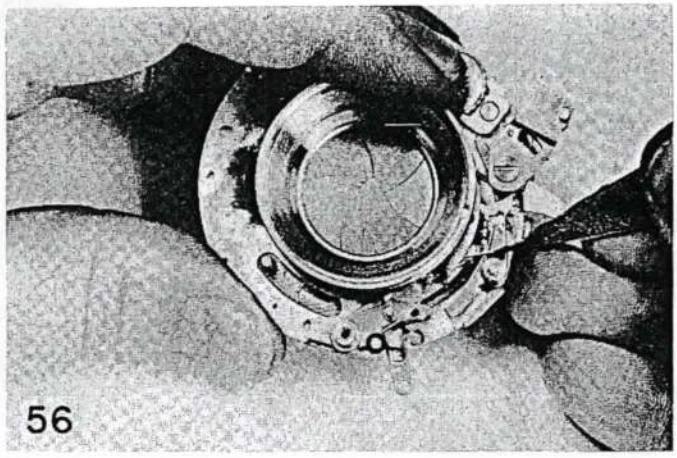


15. Figure 54 - Replace the trigger assembly as shown.

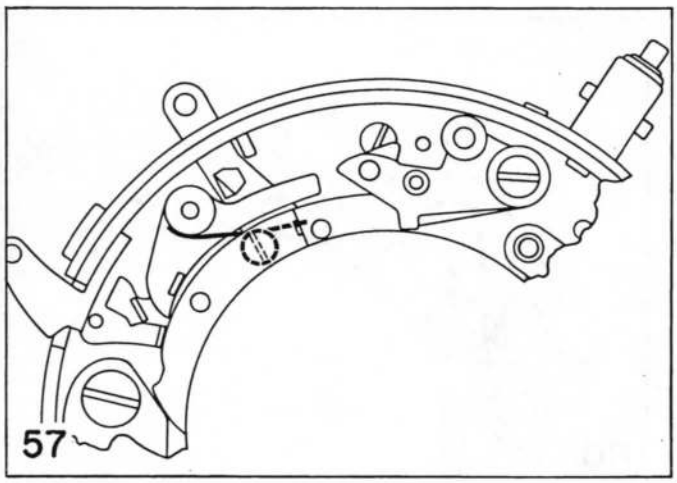
16. Replace the release lever and release lever spring (10).



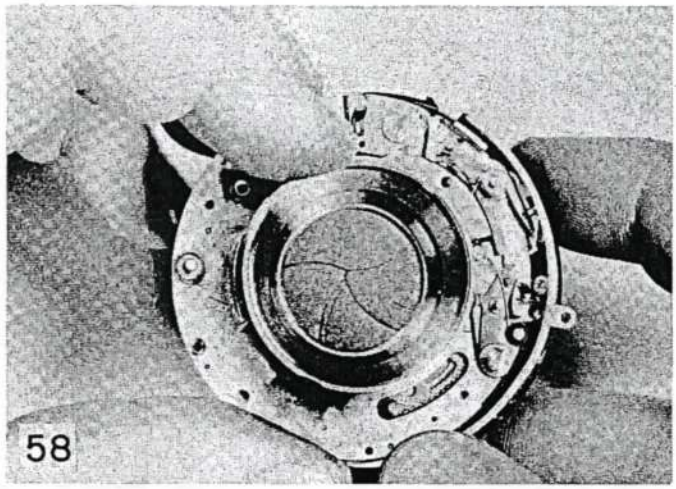
17. Figure 55 - Raise the release lever slightly; place the shorter end of the spring in the slot of the release lever as shown. Fit the coil over the shoulder of the trigger latch screw.



18. Figure 56 - Place the free end of the spring against the trigger bushing as shown. Replace the release lever screw.

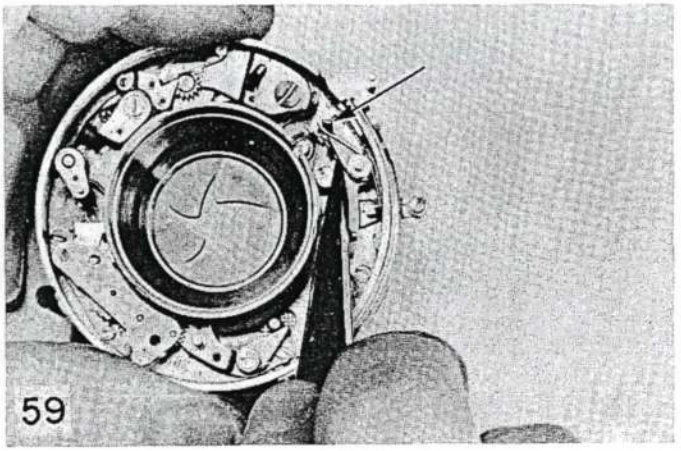


19. Figure 57 - Shows relative position of release lever spring.

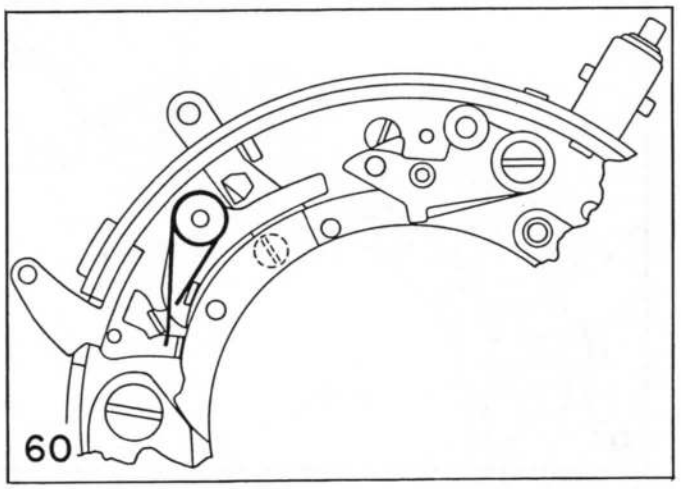


20. Figure 58 - Place the mechanism plate in the case. Open cover blades to size of aperture and ease the trigger stud into slots of cover blades.

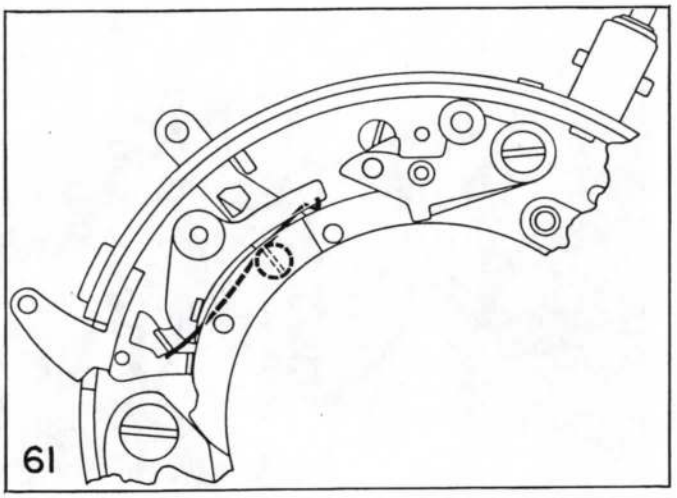
21. Replace the two back case screws (35) first. Replace the two front screws (36).



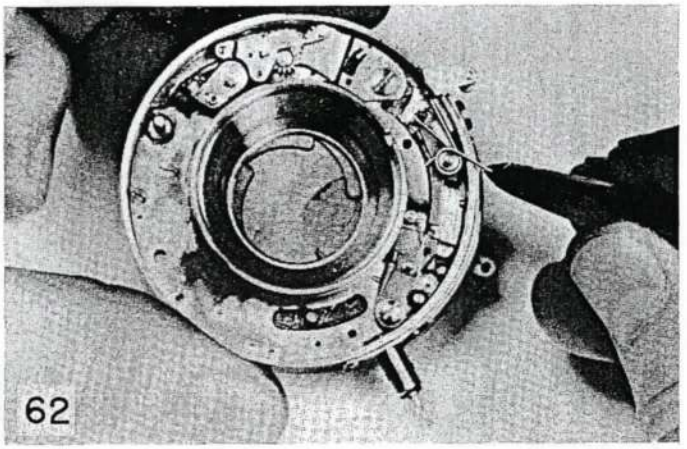
22. Figure 59 - Place the bulb lever spring over the trigger bushing with the kinked end in front of the trigger latch lug (arrow) and the short end behind the lug on the trigger.



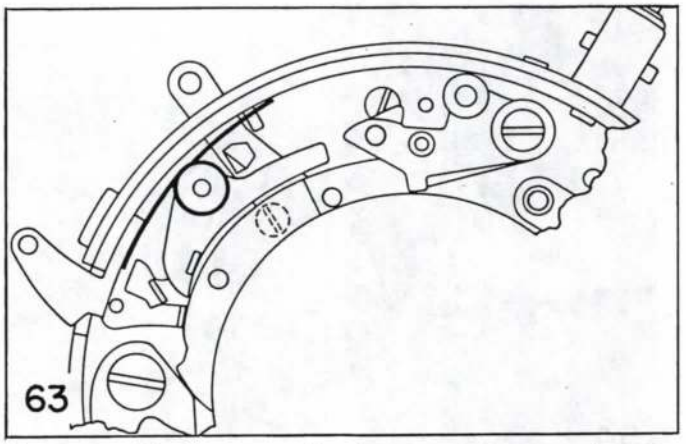
23. Figure 60 shows relative position of bulb lever spring.



24. Figure 61 - Shows old style bulb lever spring in position.



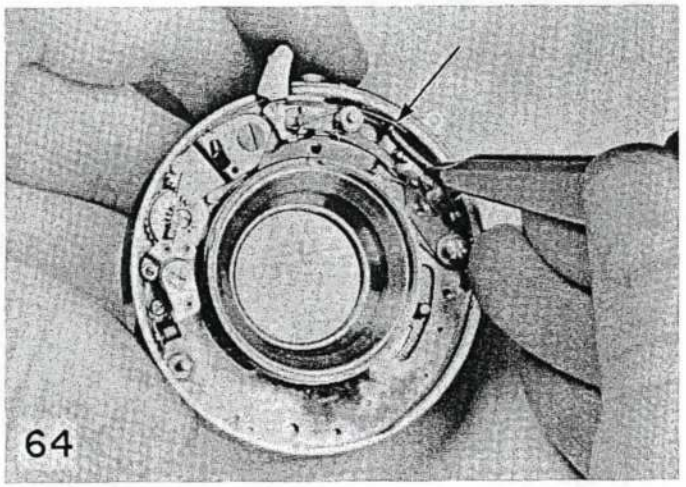
25. Figure 62 - Place the coil of the trigger spring over the trigger bushing. Trigger spring coil must be above bulb lever spring when assembled on recess of trigger bushing to avoid binding.



26. Figure 63 - Locate ends of spring as shown in drawing.

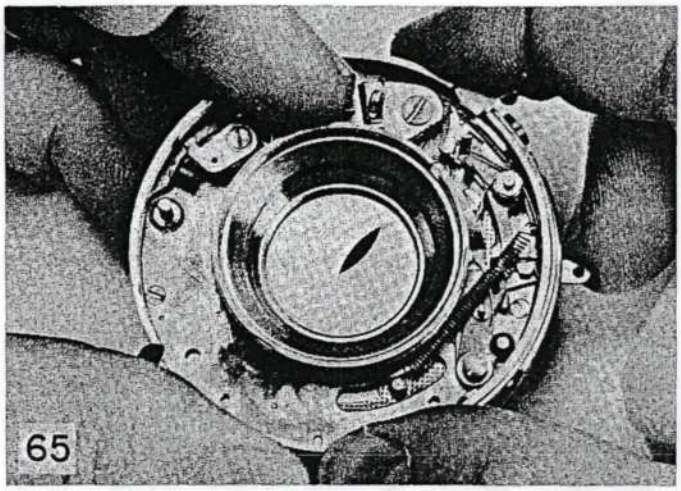
27. Reassemble the setting lever cover assembly with long connector attached (29).

28. Reassemble contact lever assembly onto end of long connector and into case (26), (25), (24), (23).

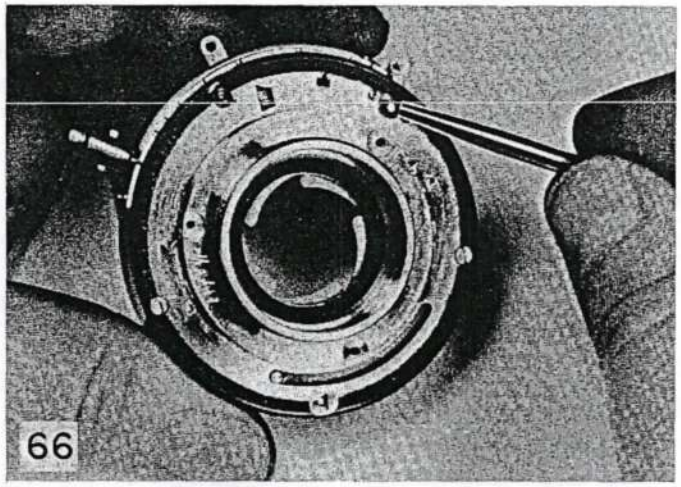


29. Figure 64 - Reassemble main spring. Hook end with loop at center of coil through hole in stud (arrow) from right-to-left. Roll spring to right with remaining loop down before hooking on blade controller stud.

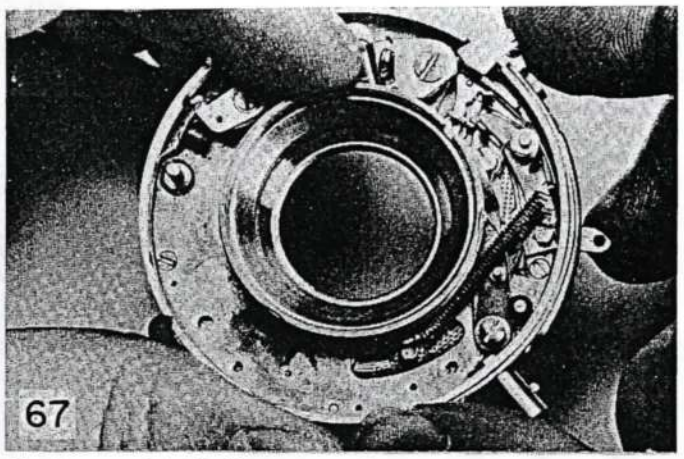
CAUTION: Before the speed control ring is placed on the shutter, do not trip the shutter without holding the set lever or the bulb lever will be damaged.



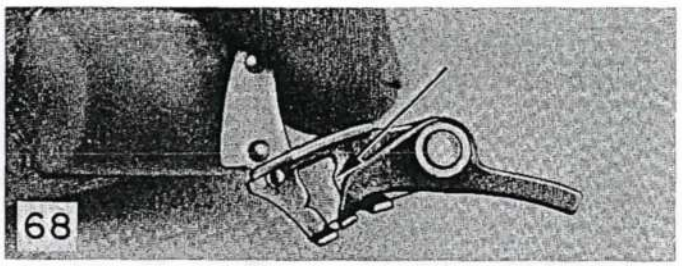
30. Figure 65 - To check cover blades, cock shutter and trip with trigger. Hold the synchro sector in, and the blade set lever at the position shown, push lug of trigger latch inward, and move the trigger in and out to check freeness of cover blades. In the closed position, blades should overlap about 1/16 inch.



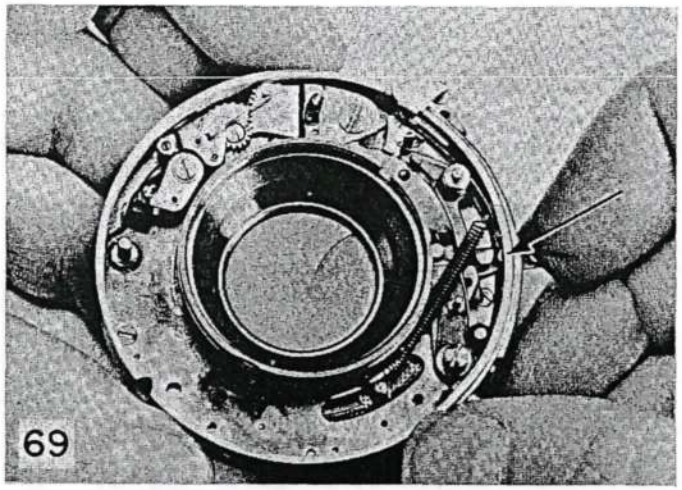
31. Figure 66 - If blades overlap too much or not enough, use tool RF723 to bend trigger stud. Bend stud away from center if blades overlap.



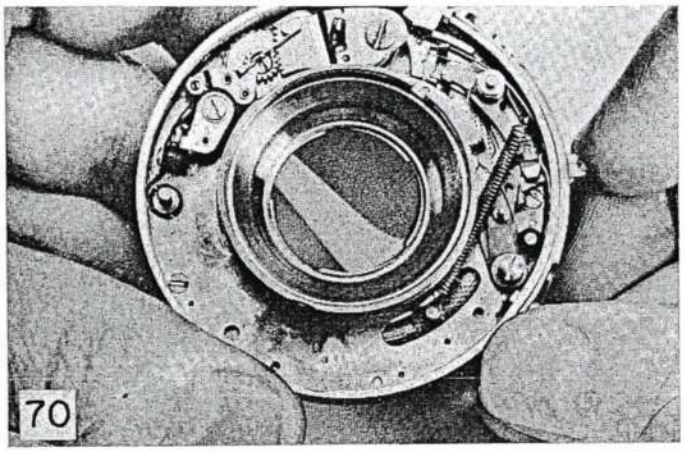
32. Figure 67 - Holding controls in the same manner as in paragraph 30, push trigger in as far as it will go (extreme open position). When trigger is pushed further, the blades should not drop into aperture.



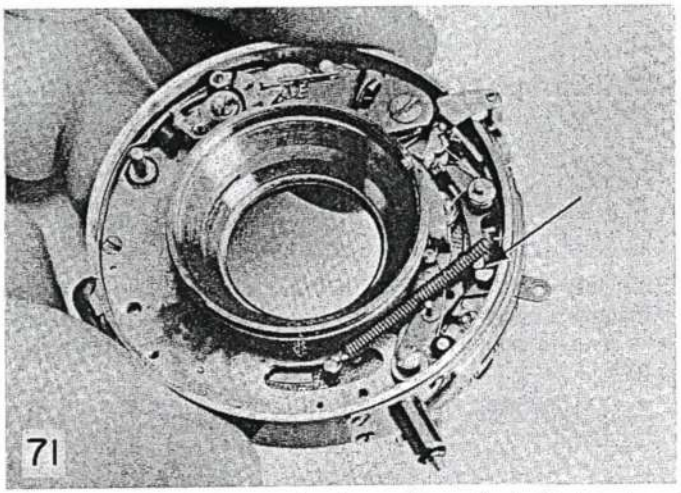
33. Figure 68 - If blades do drop into aperture, swedge trigger at point indicated by arrow. Allow slight amount of play in trigger. If blades continue to drop in, readjust trigger stud (66).



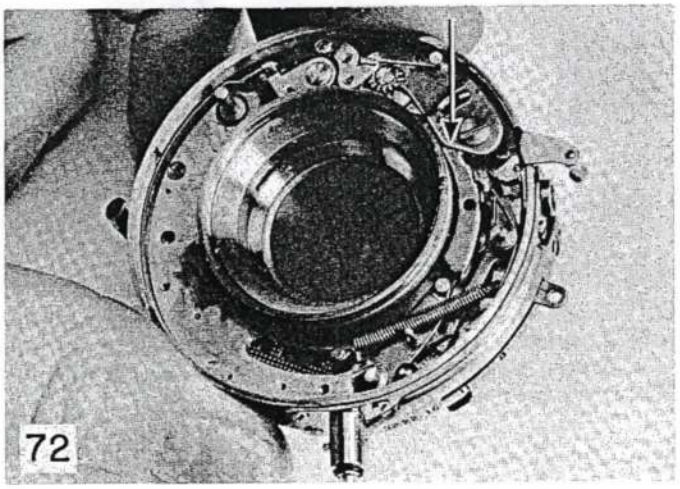
34. Figure 69 - Check clearance between release lever lock stud and formed tip of long connector (arrow) for proper Kodatron contact. Clearance should be about 1/16 inch on setting stroke. Shape contact.



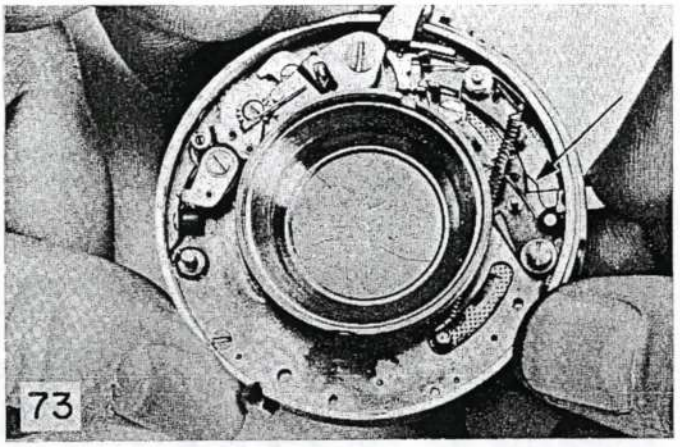
35. Figure 70 - Checking contact between stud and tip of long connector. Let lever back slowly. Contact should be firm and only at tip. Be sure stud does not touch connector before it reaches contact end.



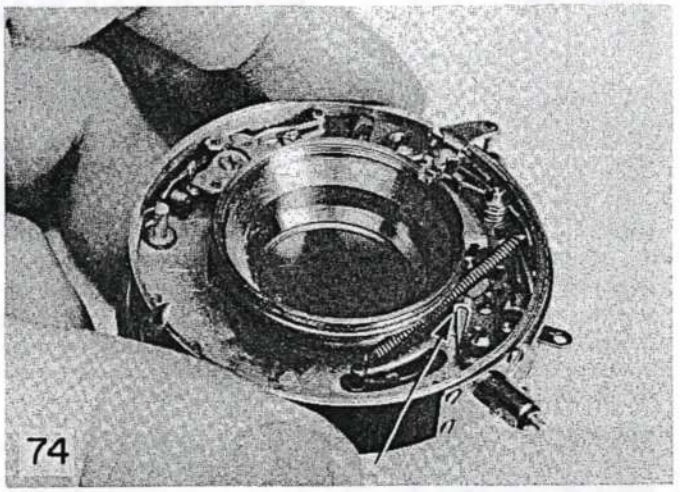
36. Figure 71 - Contact of release lever lock stud and end of bulb lever (arrow). Top of stud should be about even with top of bulb lever. Contact should be as shown.



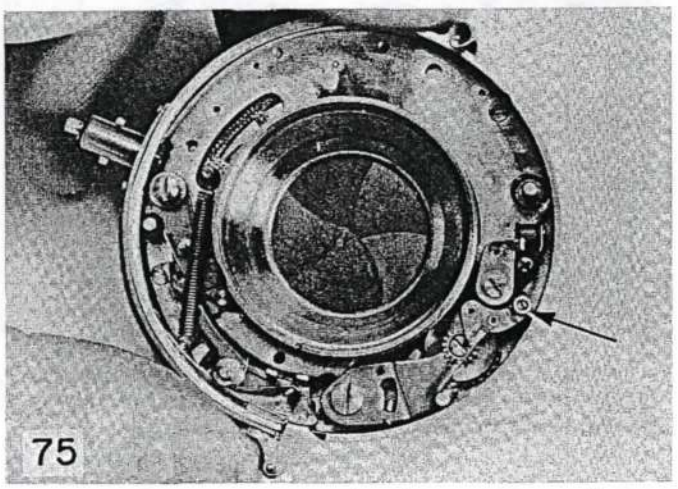
37. Figure 72 - Release lever should ride on synchro sector as shown.



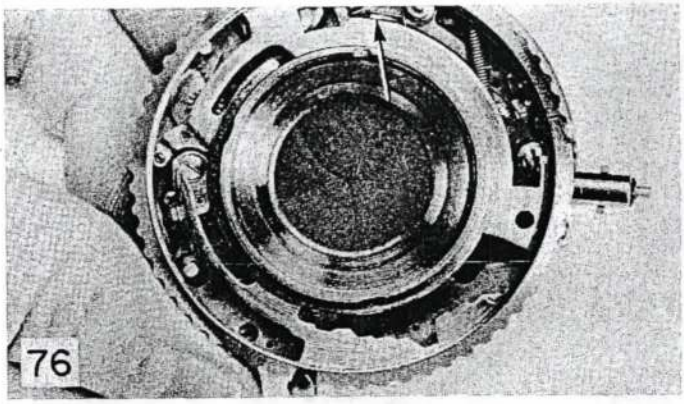
38. Figure 73 - Release lever latch should miss release lever lock stud as shown.



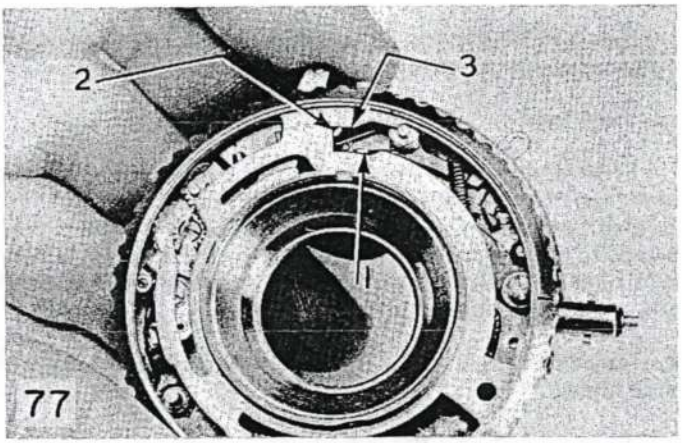
39. Figure 74 - If release lever latch hits stud, use tool RF720 to bend lug (arrow).



40. Figure 75 - Be sure that the short connector does not touch case. Use tool RF721 on nut (arrow) and small screwdriver through center of tool to increase tension on coil. Tension should be sufficient to give good, continuous contact with stud on synchro sector.



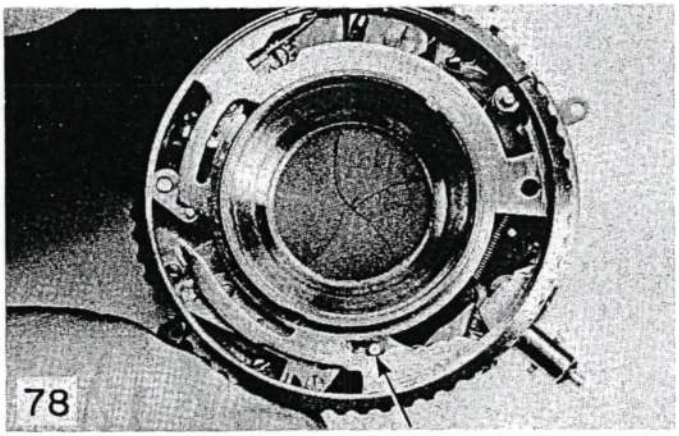
41. Figure 76 - Contact check. Place the speed ring on shutter in position shown. Using a 49 radio pilot light bulb with any 3-volt, 2-cell flasholder, check shutter for contact. If there is a flash or glow of the bulb, contact is sufficient. If no glow, increase tension on coil. (par. 40). When lug (arrow) is in position shown, stud on set lever should miss end of bulb lever.



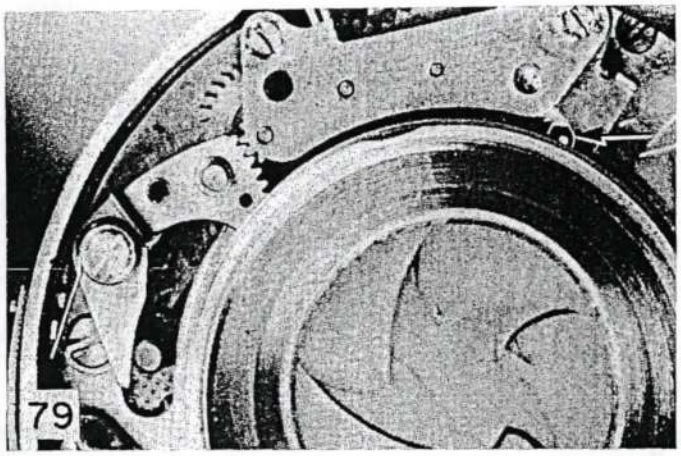
42. Figure 77 - With lug (arrow 1) in position shown, lug on set lever should contact bulb lever for at least ¾ of the width of the bulb lever.

With shutter in set position, ring should turn without lug (arrow 2) catching at point (arrow 3). With lug (2) in position shown, trigger should be free.

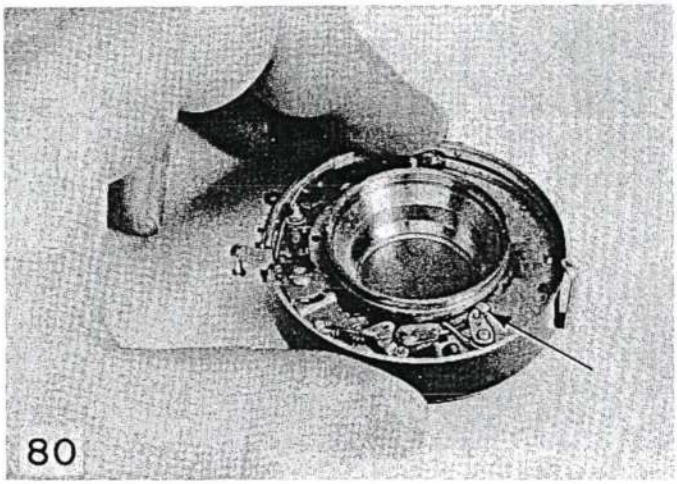
43. Reassemble gear plate and retard sector. (15 through 11).



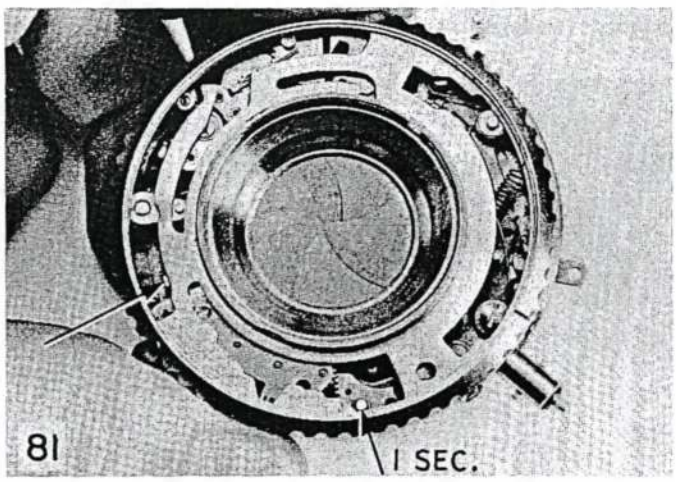
44. Figure 78 - Positioning gear plate. Place speed ring on with stud (arrow) in position shown. Move set lever to move stud on blade controller over retard sector. Play between stud (arrow) and speed ring should be very slight. Move gear plate until play is slight; then tighten gear plate screws.



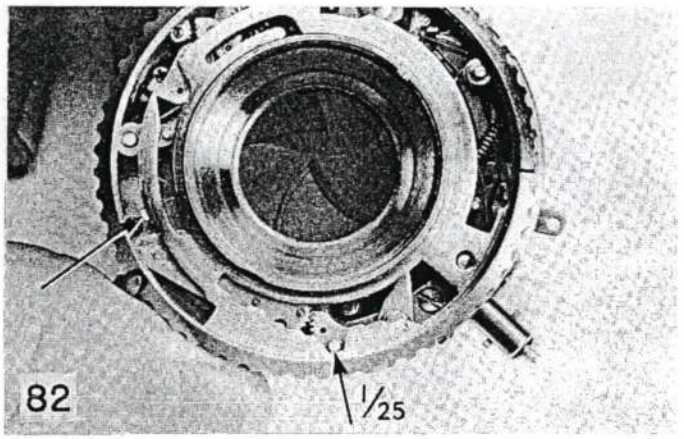
45. Figure 79 - Check for freedom of gear train. Move retard sector to check. If not free, form lug (arrow) to keep pallet from dragging too heavily.



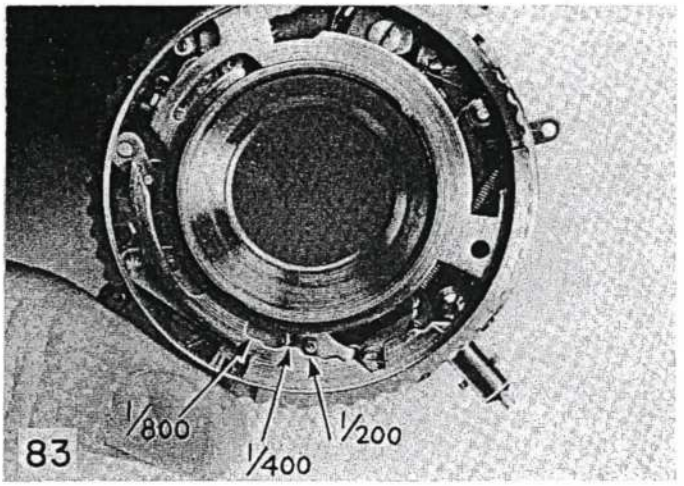
46. Figure 80 - Replace high speed spring. Stud on blade controller (arrow) should be in position shown.



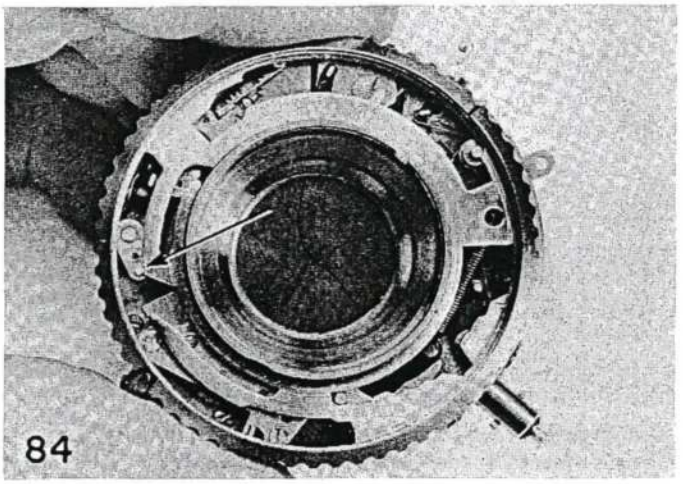
47. Figure 81 - Set speed ring for 1 second as shown. Check speed at 1 second on synchro checker. If 1 second is not obtained, adjust lug (arrow, figure 79) as required. Lug (arrow) should be forward to give full gear train action.



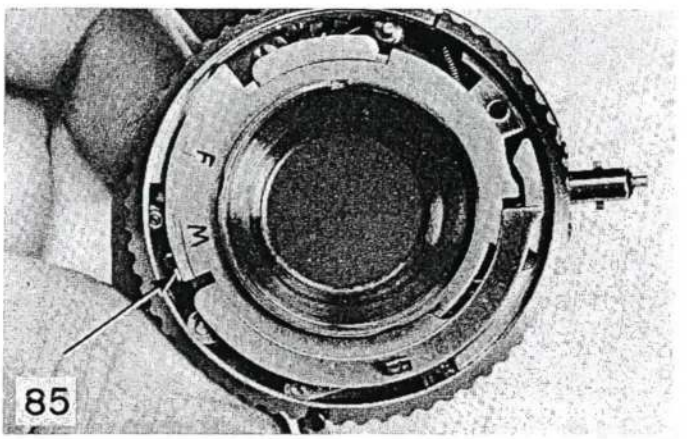
48. Figure 82 - Checking speed at 1/25. Form lug (arrow) until there is no pallet action on gear train.



49. Figure 83 - After checking and setting at 1 second and 1/25, check at 1/200. If speed ring has not been replaced, other speeds should be satisfactory. If speed ring has been replaced, shutter should be checked at all speeds, swedging or filing speed ring to obtain correct speeds.



50. Figure 84 - Speed ring should have very small notch at arrow to hold high speed cam stud at 1/800 position so that it will not slip off ring during repeated trippings.



51. Figure 85 - Checking milliseconds. Set lug (arrow) in position shown. If synchro checker indicates short, bend lug toward center of lens just enough to eliminate short. Space between contact arm and synchro sector stud should be just sufficient to operate repeatedly without shorting.

Check on M. If reading is within 2 or 3 ms, swedge or file synchro ring to obtain correct reading.

Check on F. Swedge or file for correct reading.

If the reading is not within 2 or 3 ms at M, the release lever may be letting go before the synchro sector has traveled far enough. If release lever is not holding long enough to obtain proper milliseconds, it may be adjusted as in figure 74 or the release lever latch angle re-squared with a stove, if wear is in evidence.

52. Replace index plate (5). Check at X. Should have no ms reading.

53. Reassemble (34) through (30).

54. Reassemble (3) through (1).

55. Place the shutter on the camera and refocus.

EASTMAN KODAK COMPANY

Rochester 4, New York

9-50-KP-B

Lithographed in the United States of America

ORDER PARTS FROM REPAIR PARTS SERVICE • EASTMAN KODAK COMPANY, ROCHESTER 4, N.Y.

OCTOBER 1955 PARTS LIST No. 5501-B

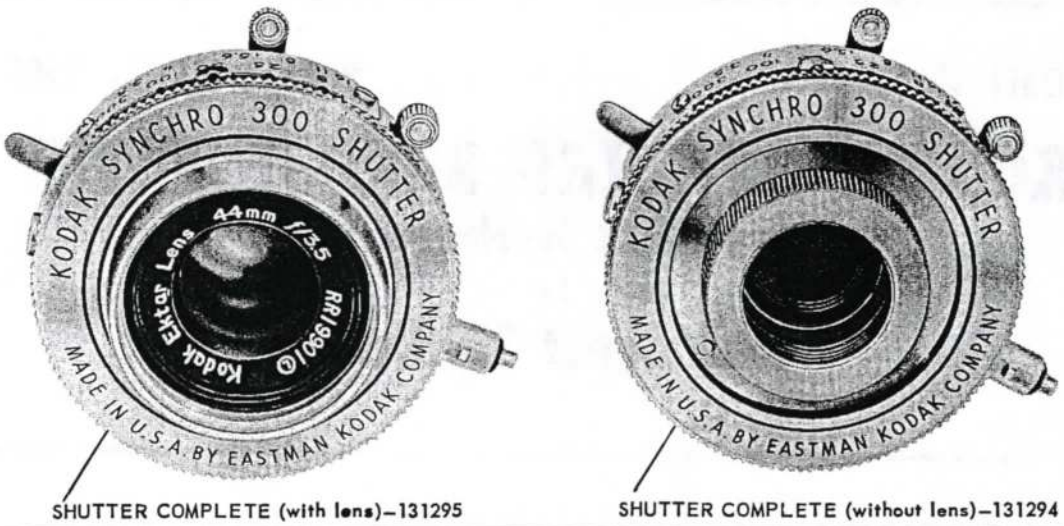
KODAK SYNCHRO 300 SHUTTER

(Type M-F-X Synchronization)

for

Kodak Signet 35 Cameras

EASTMAN KODAK COMPANY • ROCHESTER 4, N.Y.


KODAK SYNCHRO 300 SHUTTER
Kodak Ektar Lens 44mm f/3.5
MADE IN U.S.A. BY EASTMAN KODAK COMPANY
KODAK SYNCHRO 300 SHUTTER
MADE IN U.S.A. BY EASTMAN KODAK COMPANY

SHUTTER COMPLETE (with lens)–131295

SHUTTER COMPLETE (without lens)–131294

Figure 1

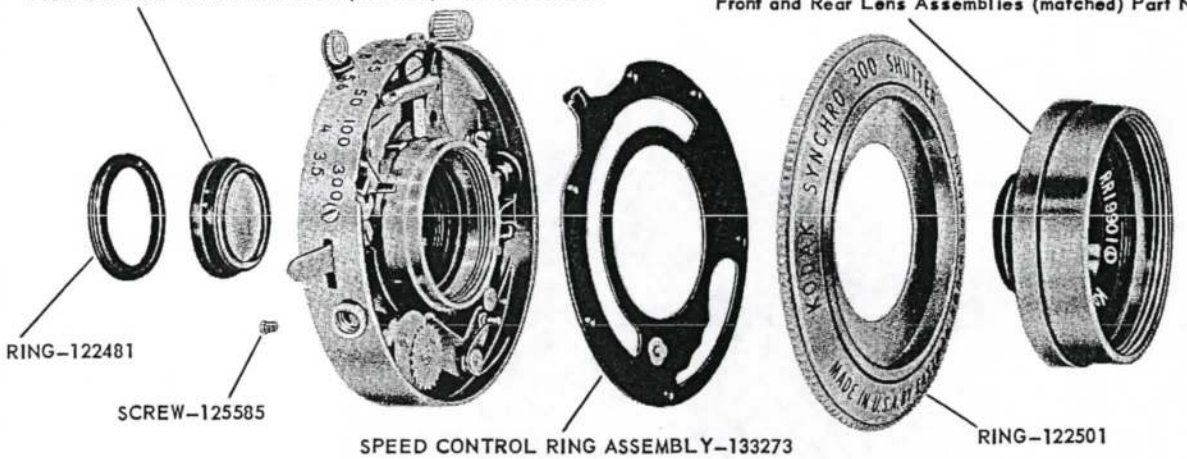
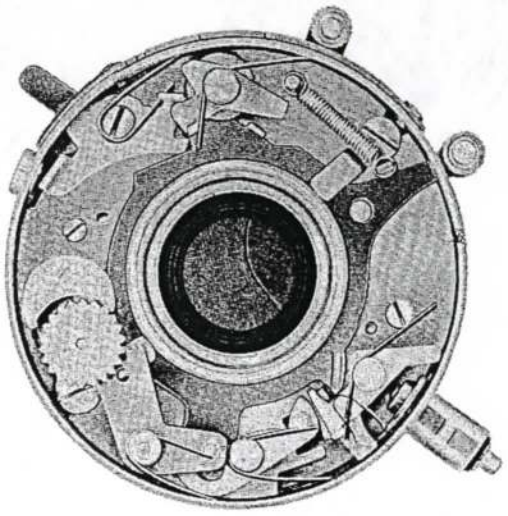

REAR LENS ASSEMBLY–Available only as a set of Front and Rear Lens Assemblies (matched) Part No. 802260
FRONT LENS ASSEMBLY–Available only as a set of Front and Rear Lens Assemblies (matched) Part No. 802260
RING–122481
SCREW–125585
SPEED CONTROL RING ASSEMBLY–133273
RING–122501

Figure 2



This illustration shows springs and related parts in position

Figure 3

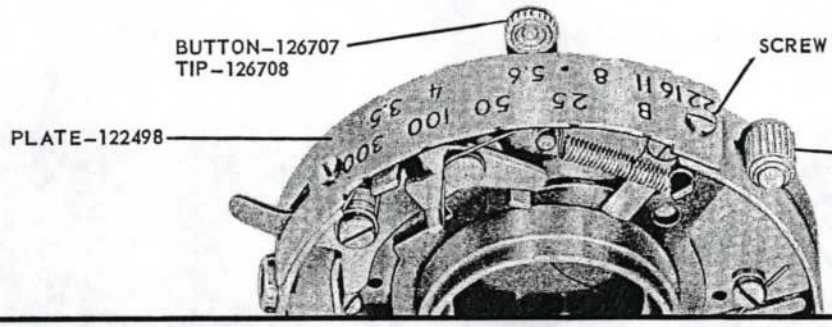


Figure 4

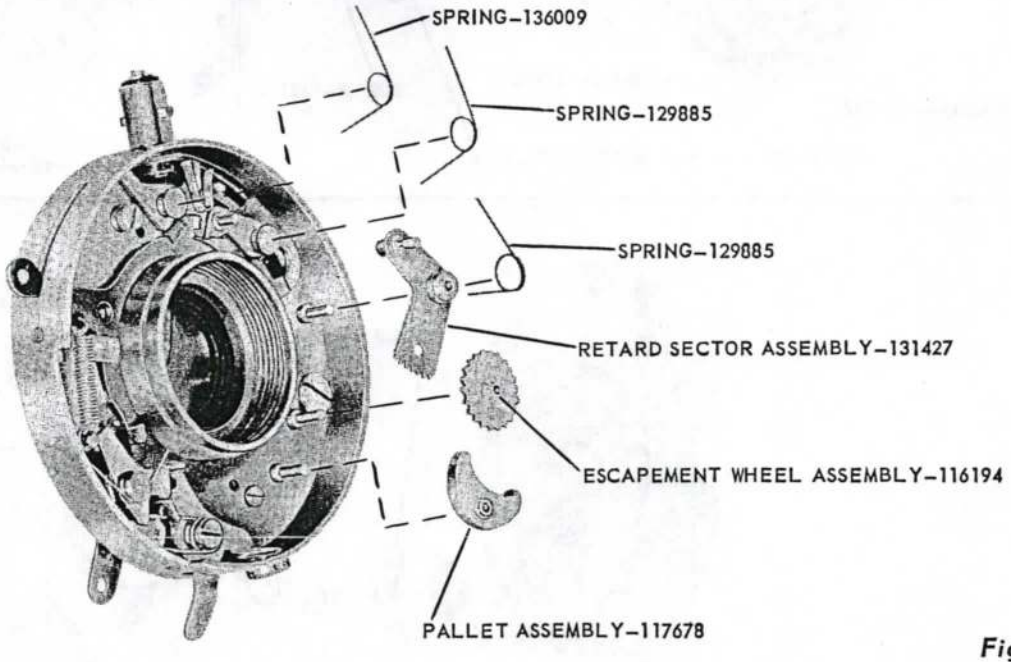


Figure 5

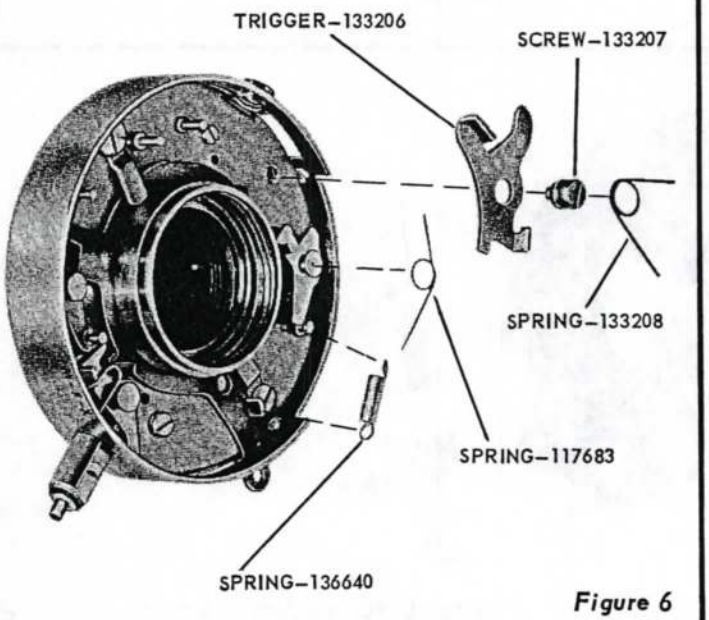


Figure 6

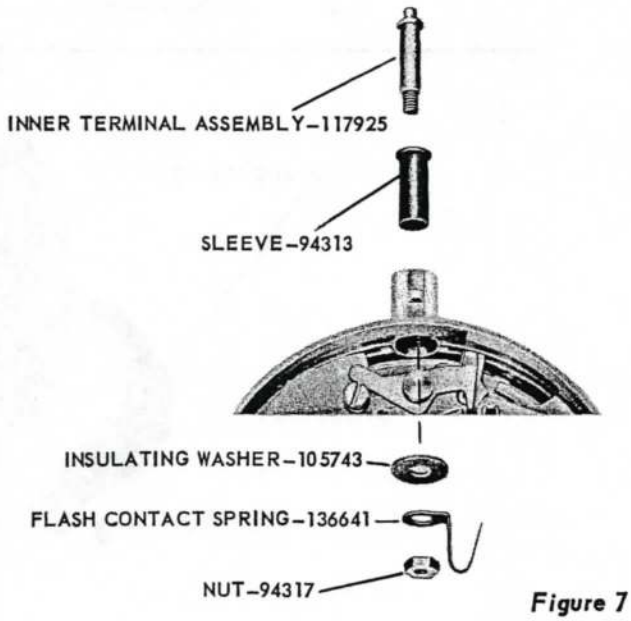


Figure 7

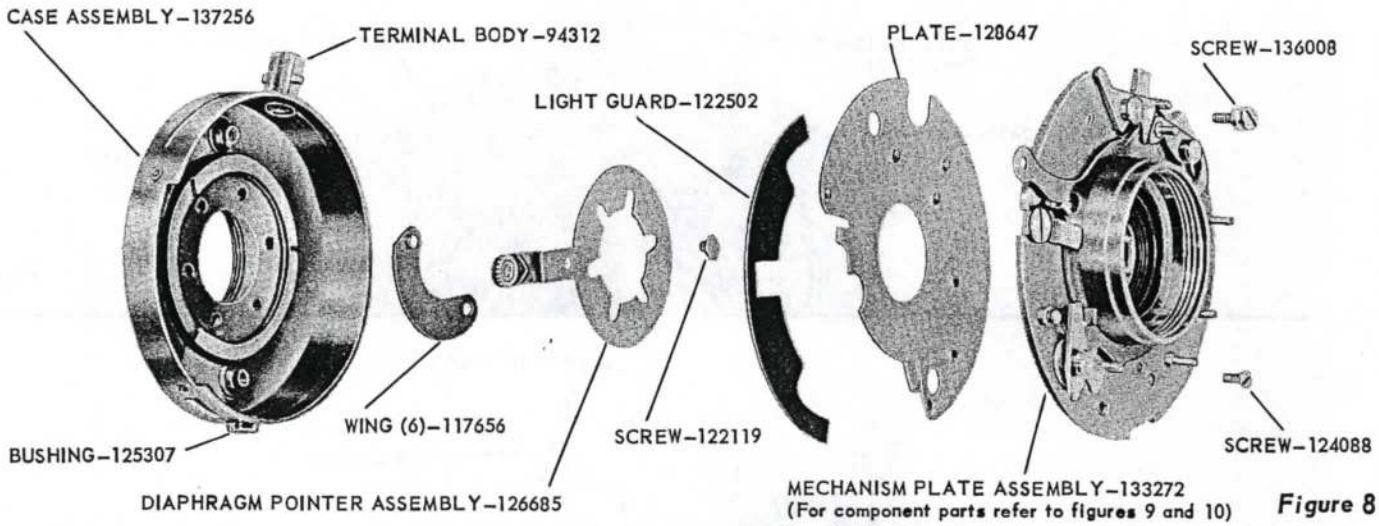


Figure 8

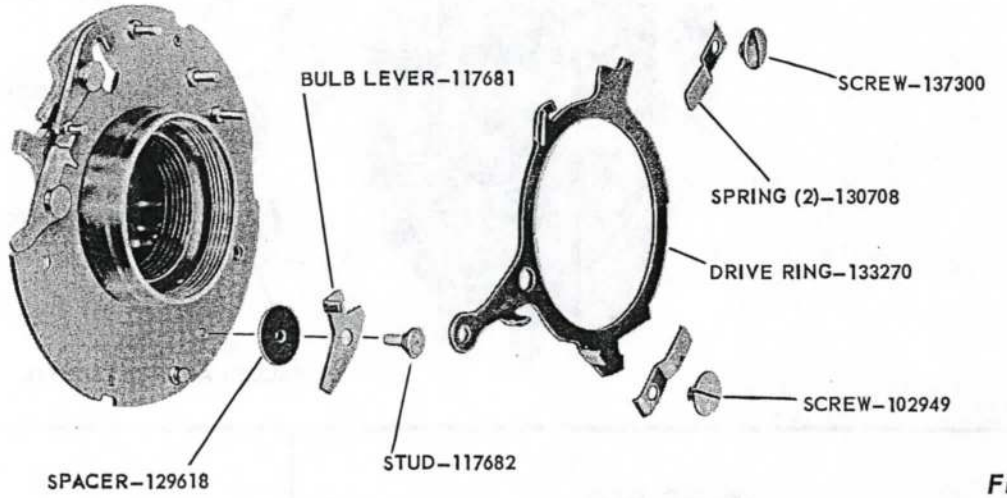


Figure 9

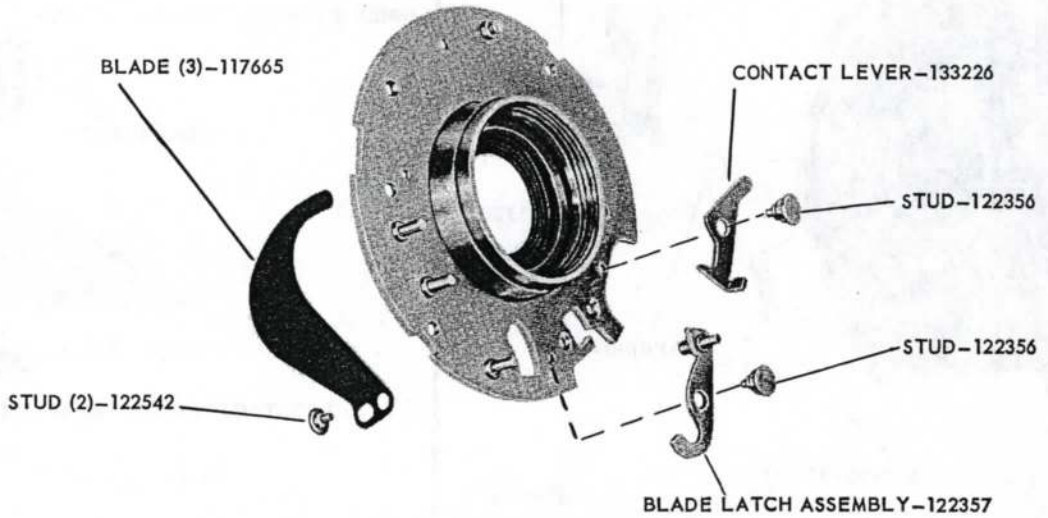


Figure 10

KODAK SYNCHRO 300 SHUTTER (Type M-F-X Synchronization)
for Kodak Signet 35 Cameras

FIG.	PART NO.	PART NAME	REQD.
8	94312	Body - Terminal	1
7	94313	Sleeve - Insulating	1
7	94317	Nut - Terminal	1
9	102949	Screw - Drive ring retaining spring, small head	1
4	102975	Screw - Diaphragm index plate	2
7	105743	Washer - Insulating	1
5	116194	Escapement Wheel Assembly	1
8	117656	Wing - Diaphragm	6
10	117665	Blade - Shutter	3
5	117678	Pallet Assembly	1
9	117681	Lever - Bulb	1
9	117682	Stud - Bulb lever	1
6	117683	Spring - Bulb lever	1
7	117925	Inner Terminal Assembly	1
8	122119	Screw - Diaphragm pointer	1
10	122356	Stud - Blade latch (1), contact lever (1)	2
10	122357	Blade Latch Assembly	1
2	122481	Ring - Rear lens clamping	1
4	122498	Plate - Speed and diaphragm index	1
2	122501	Ring - Speed actuating	1
8	122502	Guard - Diaphragm pointer light	1
10	122542	Stud - Blade pivot	2
4	123110	Button - Setting lever	1
8	124088	Screw - Mechanism plate retaining	1
8	125307	Bushing - Cable release	1
2	125585	Screw - Shutter locating	1
8	126685	Diaphragm Pointer Assembly	1
4	126707	Button - Diaphragm pointer	1
4	126708	Tip - Diaphragm pointer	1
8	128647	Plate - Diaphragm retainer	1
9	129618	Spacer - Bulb lever	1
5	129885	Spring - Retard sector return (1), blade latch (1)	2
9	130708	Spring - Drive ring retaining	2
1	131294	Shutter Complete (without lens)	1
1	131295	Shutter Complete (with lens)	1
5	131427	Retard Sector Assembly	1
6	133206	Trigger	1
6	133207	Screw - Trigger	1
6	133208	Spring - Trigger	1
10	133226	Lever - Contact	1
9	133270	Ring - Drive	1
8	133272	Mechanism Plate Assembly	1
2	133273	Speed Control Ring Assembly	1
8	136008	Screw - Mechanism plate to case	1
5	136009	Spring - Contact lever	1
6	136640	Spring - Main drive	1
7	136641	Spring - Flash contact	1
8	137256	Case Assembly	1
9	137300	Screw - Drive ring retaining spring, large head	1
	802260	Front and Rear Lens Assemblies (matched)	1 set

EASTMAN KODAK COMPANY • ROCHESTER 4, N. Y.

12-55-GLP-B

Lithographed in the United States of America

Kodak

Repair Bulletin

MODIFYING THE KODAK TBI CABLE RELEASE No. 2 (cloth)

for use on

KODAK SYNCHRO-RAPID 800 and KODAK SYNCHRO 300 SHUTTERS

RF-121

September, 1951

Since neither the Synchro-Rapid 800 or Synchro 300 Shutter has a (time) setting, a TBI cable release is needed to make time exposures. It has been noticed that the Kodak TBI Cable Release No. 2 (Cloth) does not latch properly to hold the shutter blades open, since the trigger assembly has such a short stroke that the cable release just barely reaches the first ratchet tooth before tripping the shutter.

To make sure the cable release will not trip the shutter before reaching at least the third or fourth tooth, shorten the plunger approximately 1/16 inch with cutters or a saw. Be sure to dress the plunger tip afterwards to restore its shape.

EASTMAN KODAK COMPANY
ROCHESTER 4, N. Y.

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10-51-GLP-B

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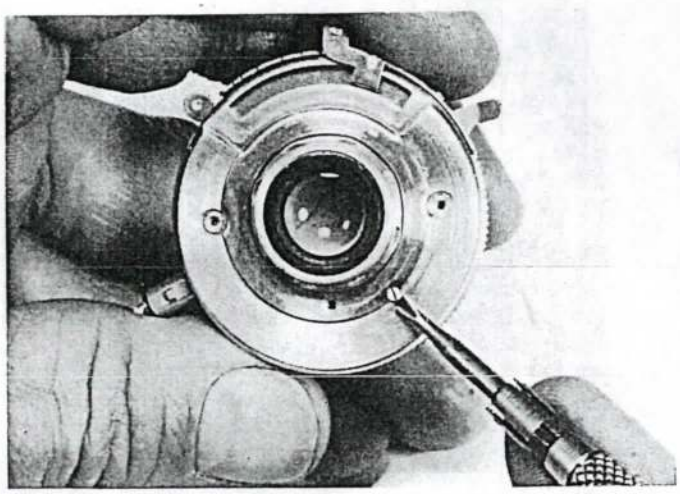
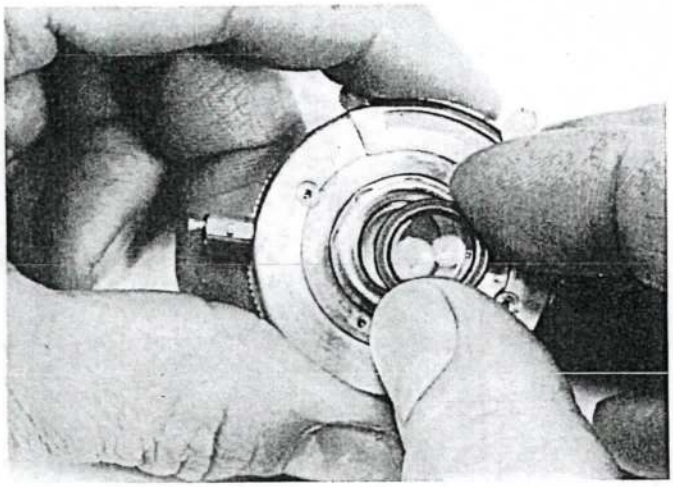
KODAK SYNCHRO 300 SHUTTER

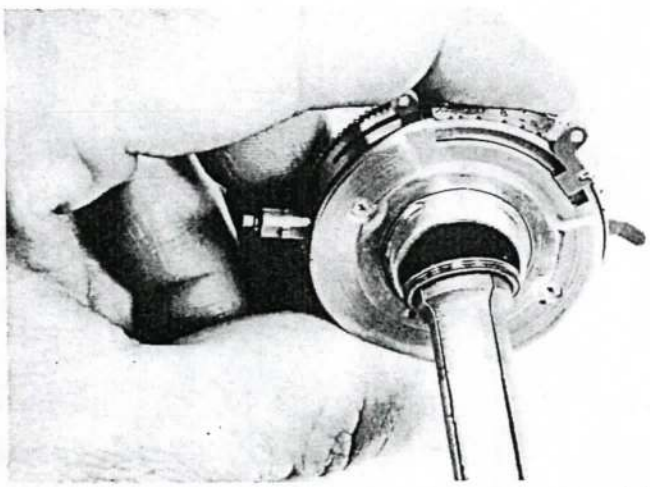
Disassembly



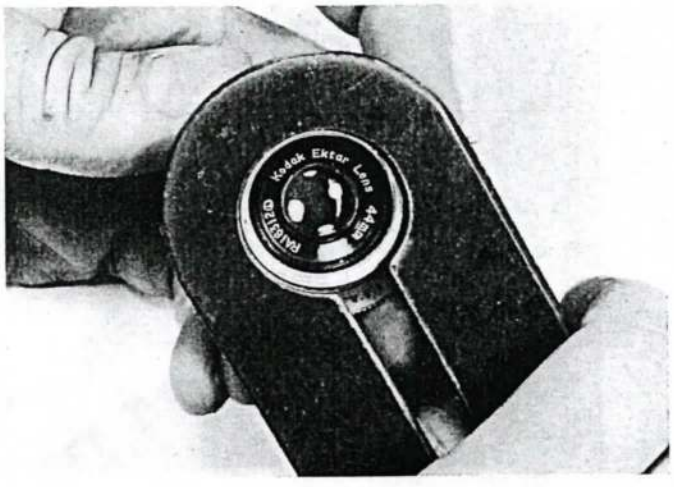
125. Remove the shutter locating screw.



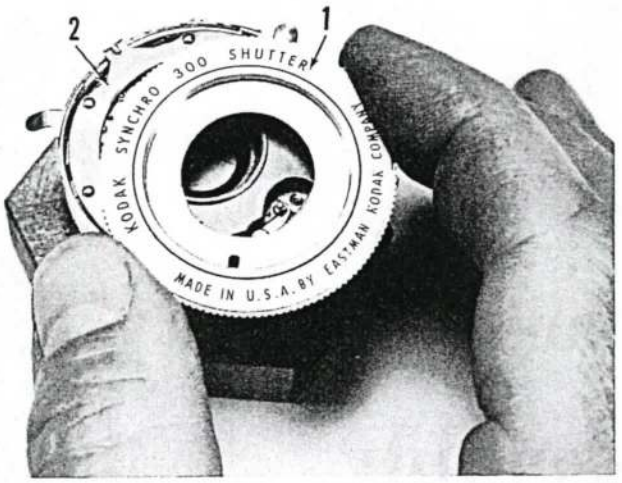
127. Remove the rear lens.



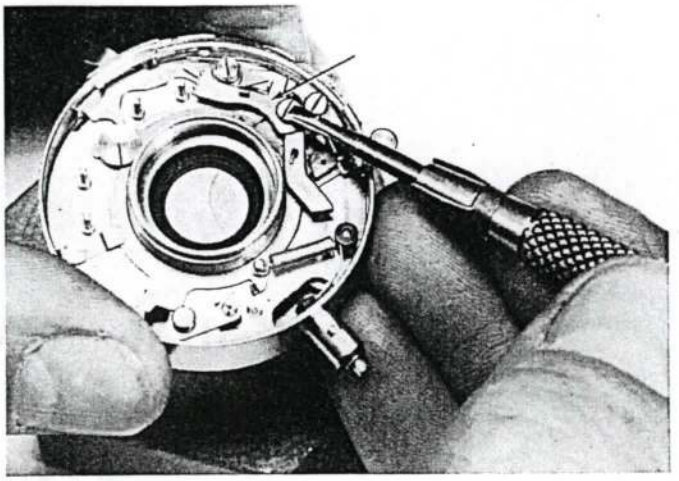
126. Remove the rear lens clamping ring using tool No. 280 in tool No. 751 handle (formerly tool No. 226A).



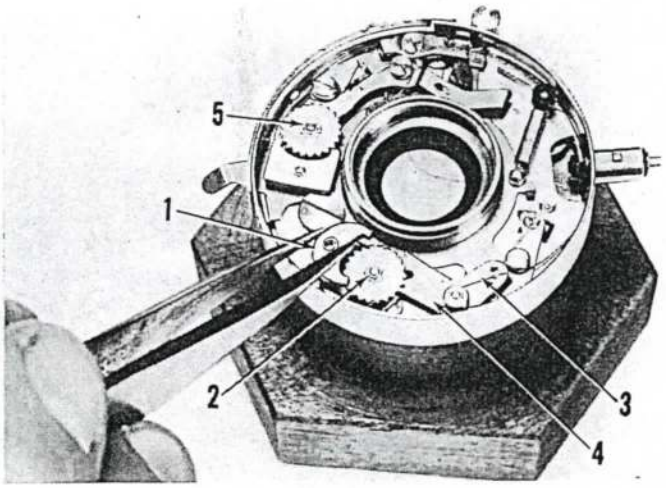
128. Remove the front lens assembly using tool No. 757 (formerly tool No. 514A1).



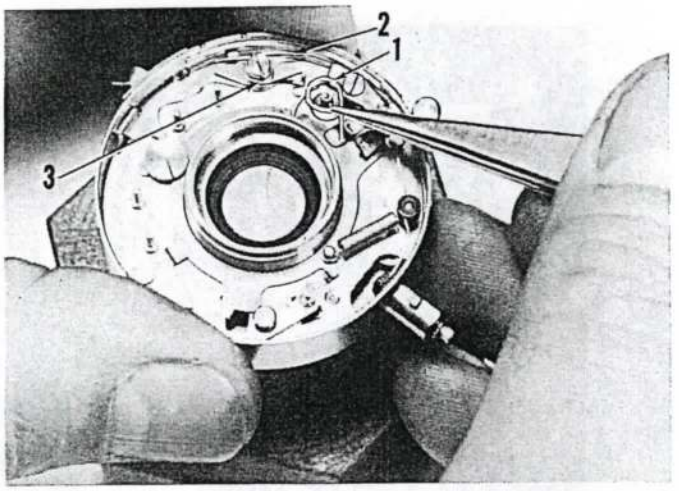
129. Remove the speed actuating ring (arrow 1) and the speed control ring (arrow 2).



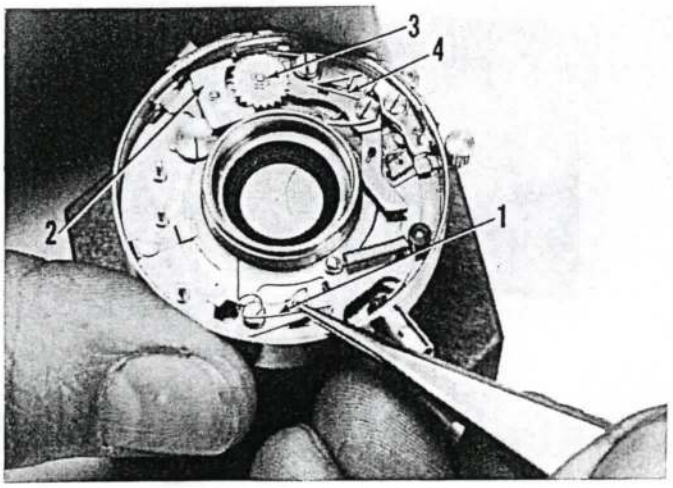
132. Remove the synchro sector screw (arrow) and the synchro sector.



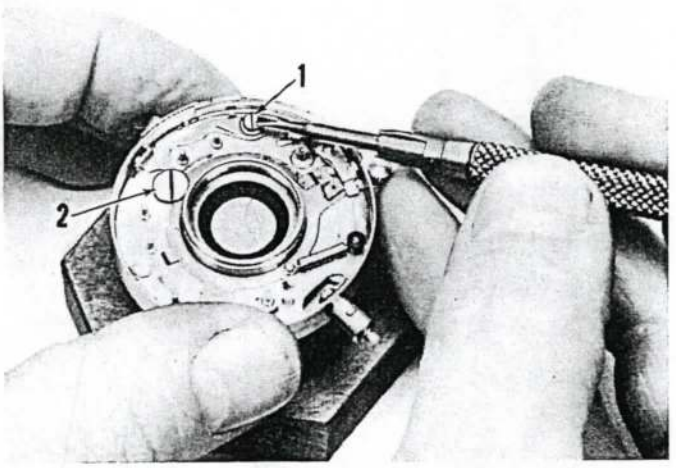
130. Remove the retard pallet (arrow 1), the star wheel (arrow 2), the retard sector spring (arrow 3) and the retard sector (arrow 4).



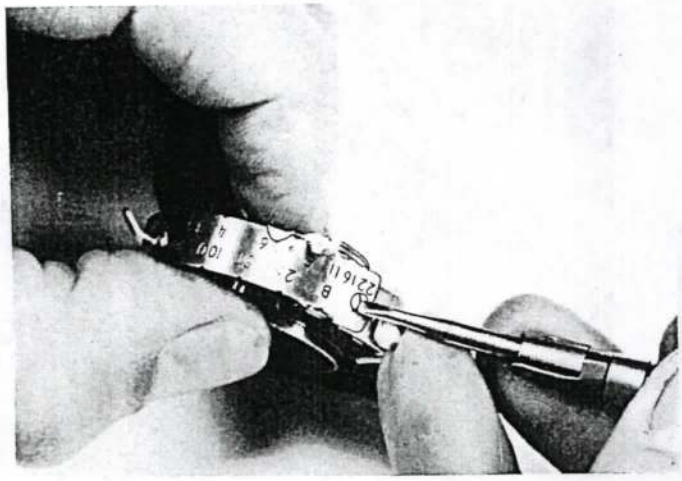
133. Remove the synchro sector drive spring (arrow 1), the trigger spring (arrow 2), and the trigger latch spring (arrow 3).



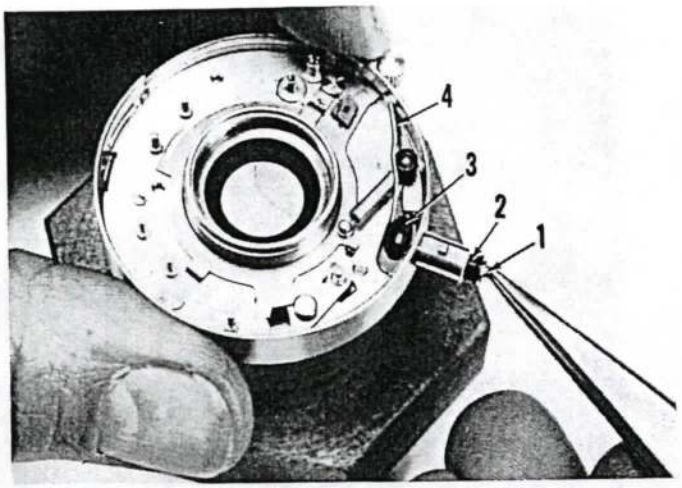
131. Remove the blade latch spring (arrow 1), the synchro pallet (arrow 2), the star wheel (arrow 3), and the synchro sector return spring (arrow 4).



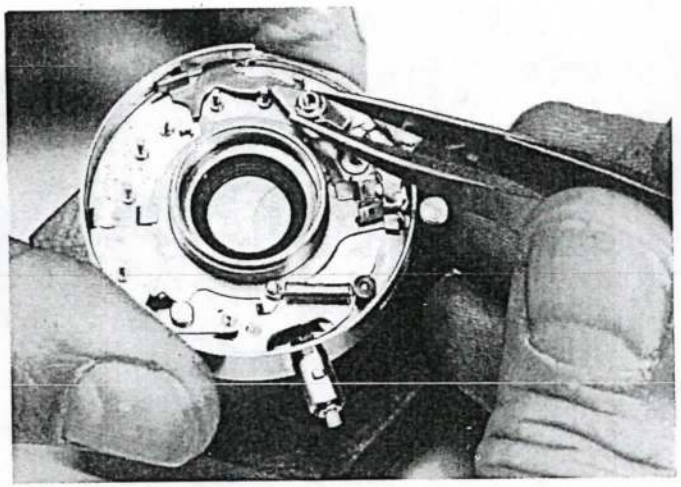
134. Remove the trigger screw (arrow 1), and the trigger guide screw (arrow 2).



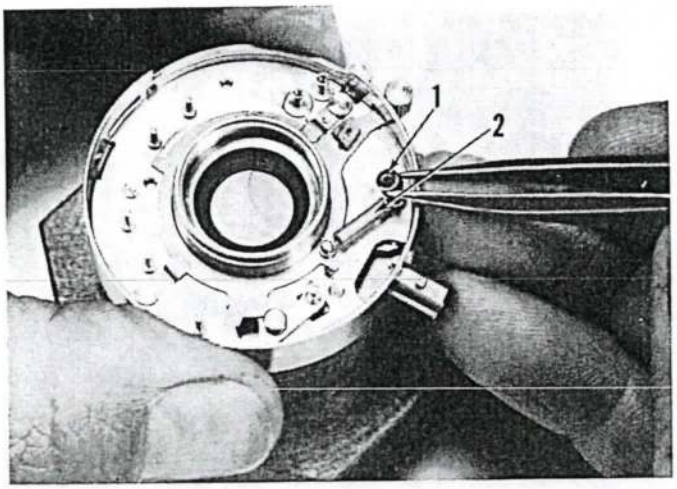
135. Remove the speed and diaphragm plate screws and plate.



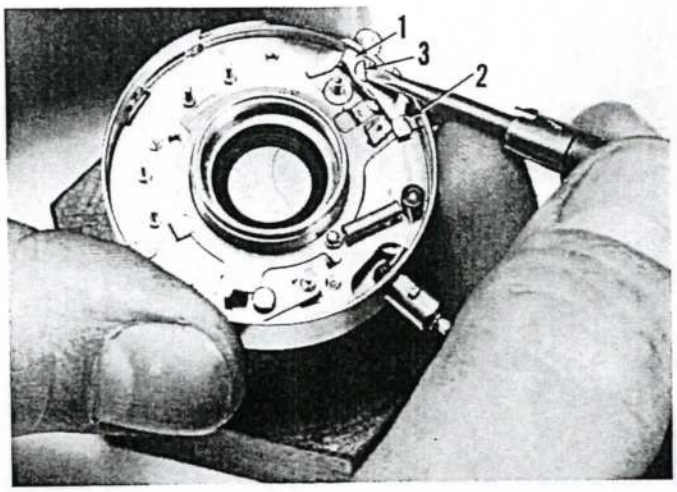
138. Remove the inner terminal nut, the inner terminal (arrow 1), the insulator sleeve (arrow 2), the insulating washer (arrow 3), and the contact strap (arrow 4).



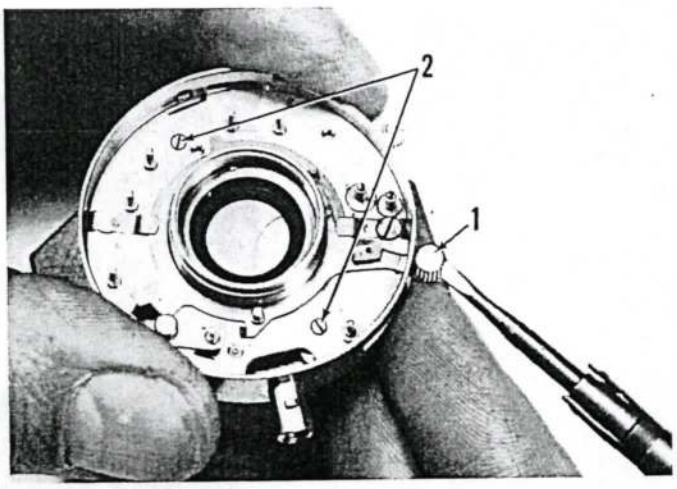
136. Lift out the trigger assembly.



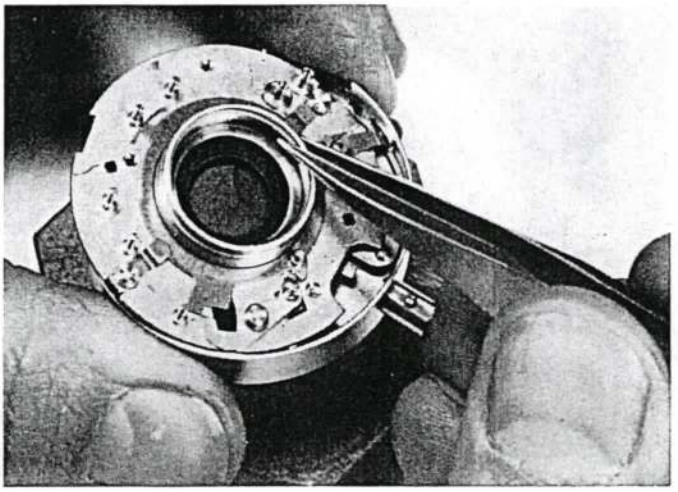
139. Remove the contact strap insulator sleeve (arrow 1) and the main drive spring (arrow 2).



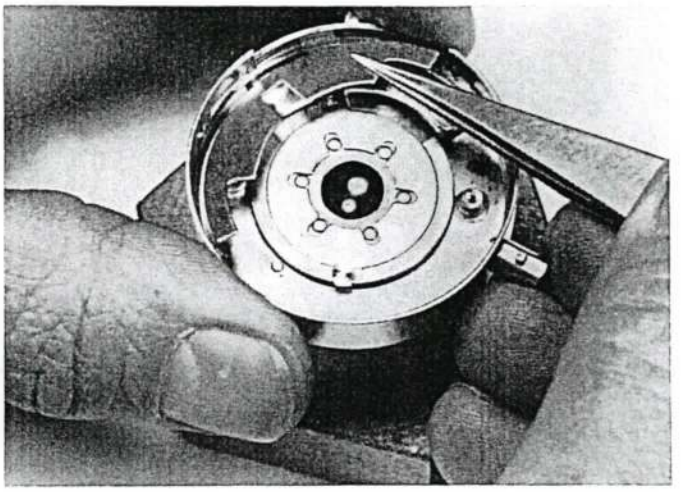
137. Remove the bulb lever (arrow 1) and bulb lever spring (arrow 2) by removing the bulb lever screw (arrow 3).



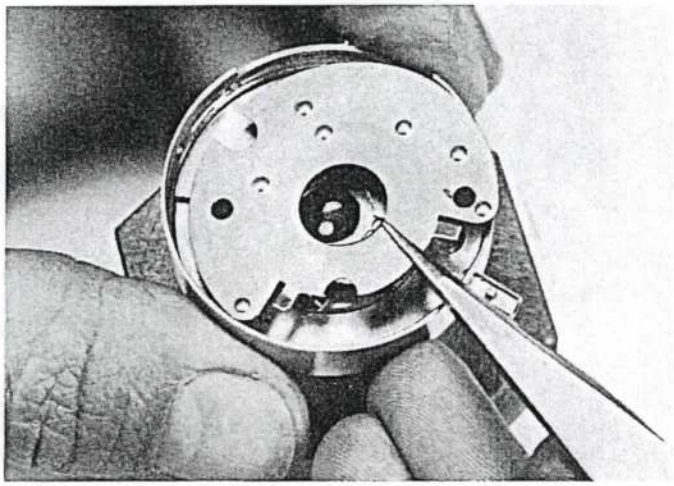
140. Remove the setting lever button (arrow 1) and the two mechanism screws (arrow 2).



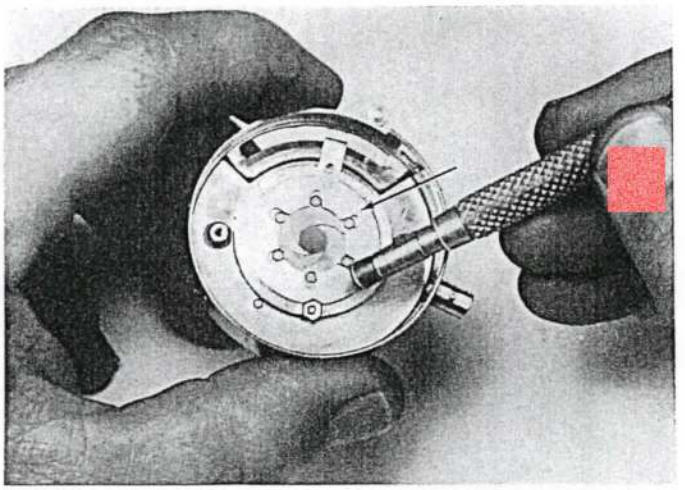
141. Remove the mechanism plate assembly and the drive ring assembly.



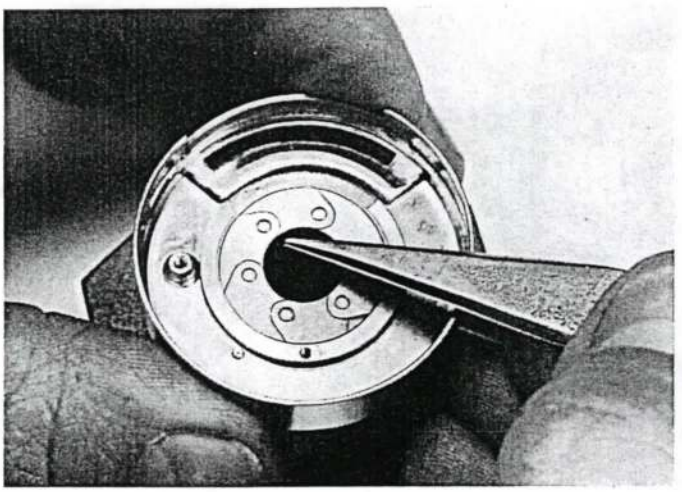
143. Remove the light guard.



142. Remove the diaphragm retainer plate.



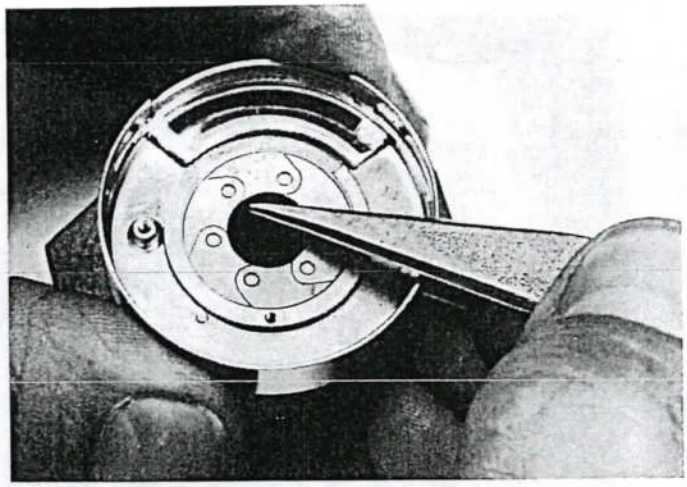
144. Remove the diaphragm pointer screw and the diaphragm pointer (arrow) using tool No. 611.



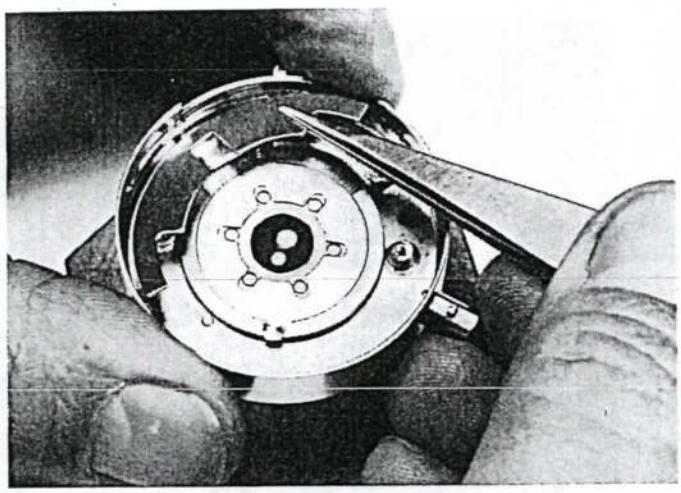
145. Remove the diaphragm wings.

KODAK SYNCHRO 300 SHUTTER

Reassembly and Adjustment

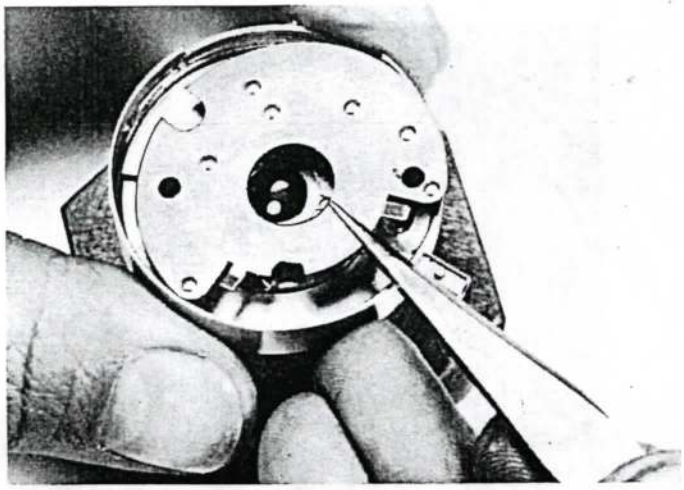


146. Replace the diaphragm wings.

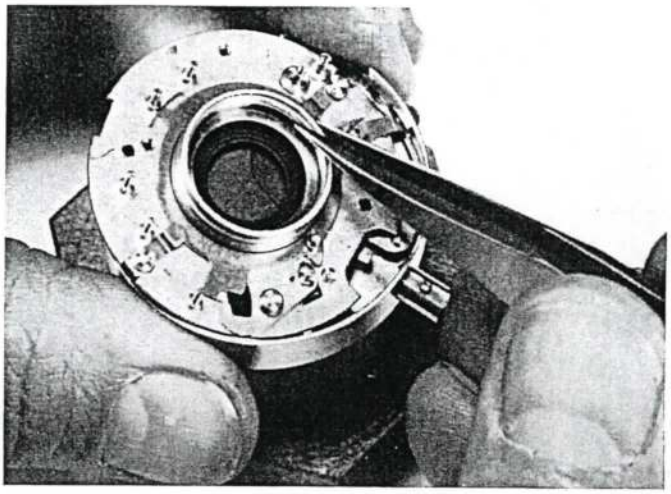


148. Replace the lightguard with the short end of the lightguard toward the terminal post.

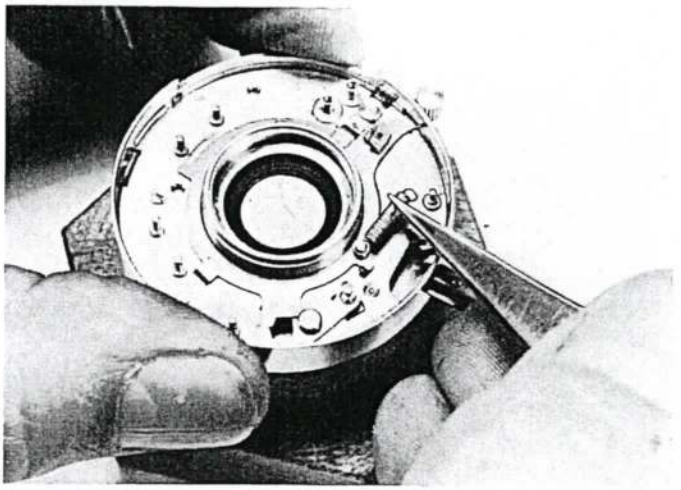
147. Replace the diaphragm pointer and pointer screw.



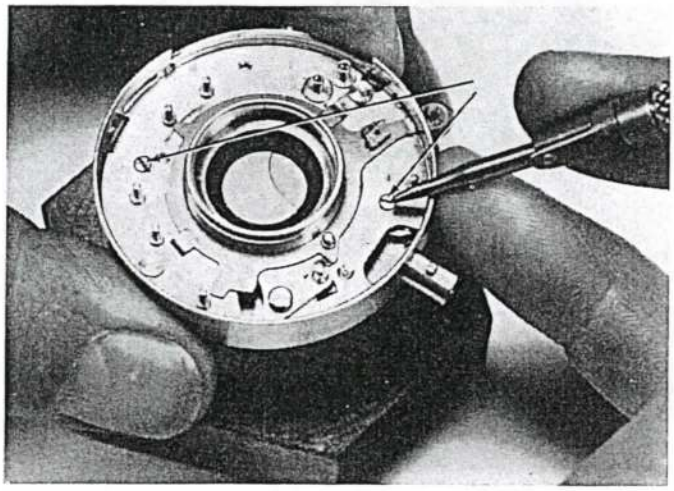
149. Replace the diaphragm retainer plate.



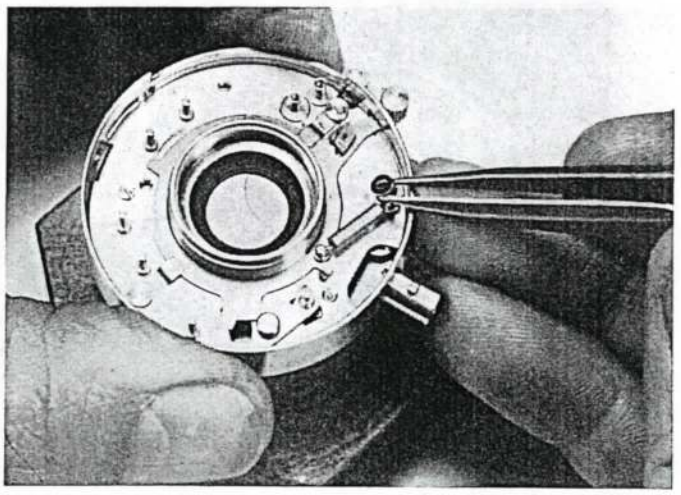
150. Replace the mechanism plate assembly and the drive ring assembly.



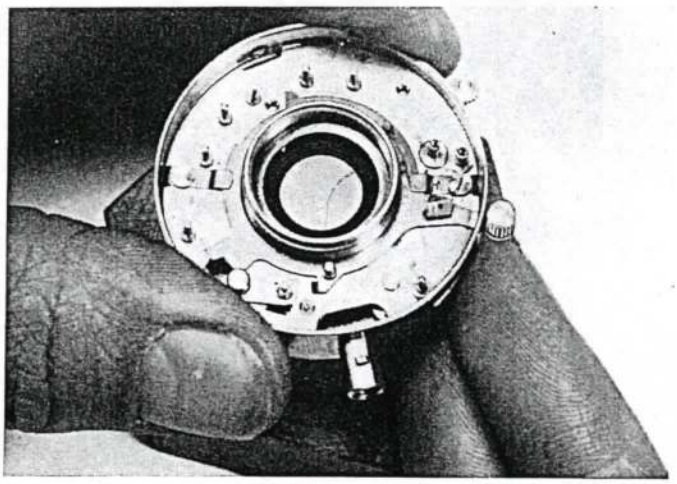
153. Attach the main drive spring to the drive ring stud and the mechanism plate stud.



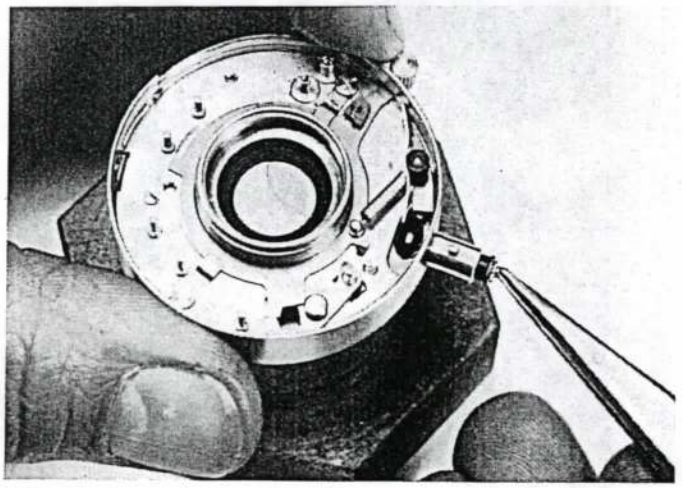
151. Replace the two mechanism plate screws (arrows).



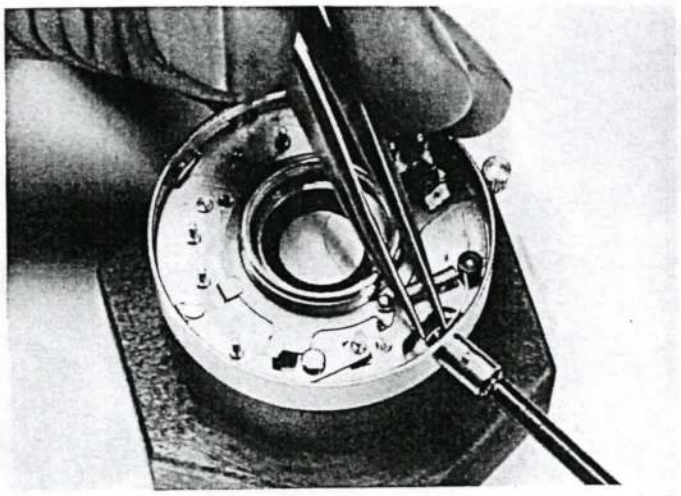
154. Replace the contact strap insulator sleeve.



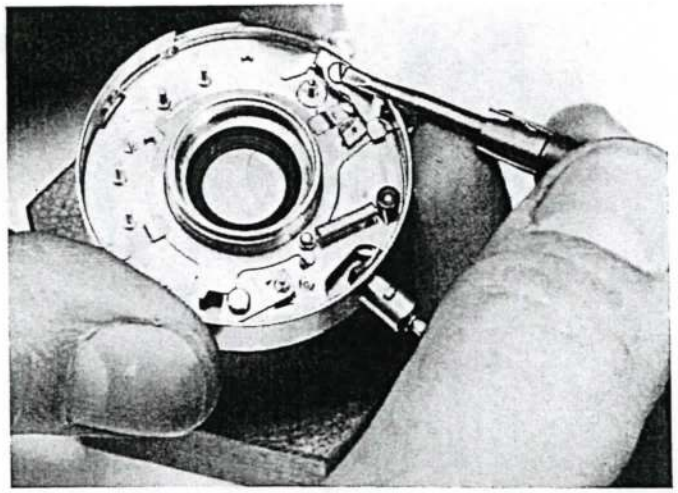
152. Replace the setting lever button on the drive ring assembly (rivet in place).



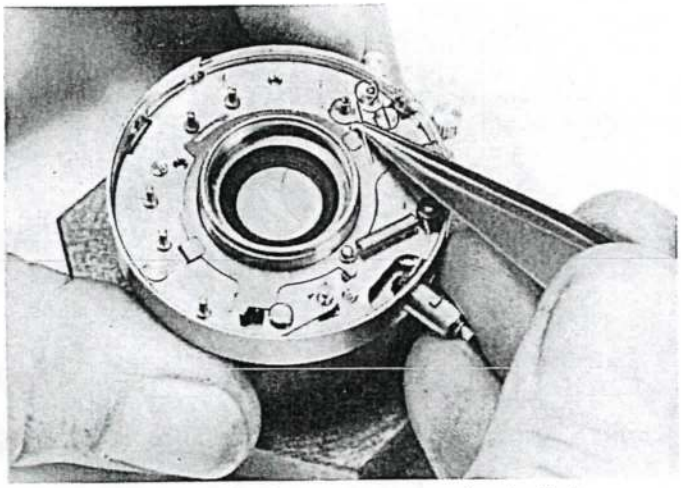
155. Replace the insulator sleeve, terminal, and the insulating washer. Place the contact strap against the insulator sleeve.



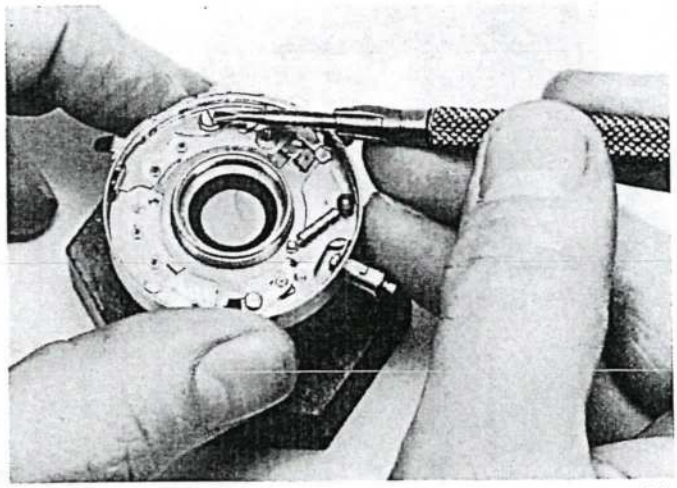
156. Replace the terminal nut. Use tool No. 657 to hold the inner terminal.



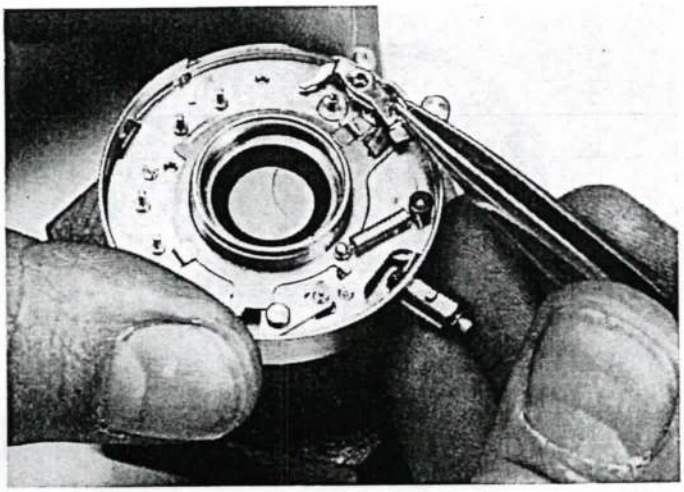
159. Replace the bulb lever screw.



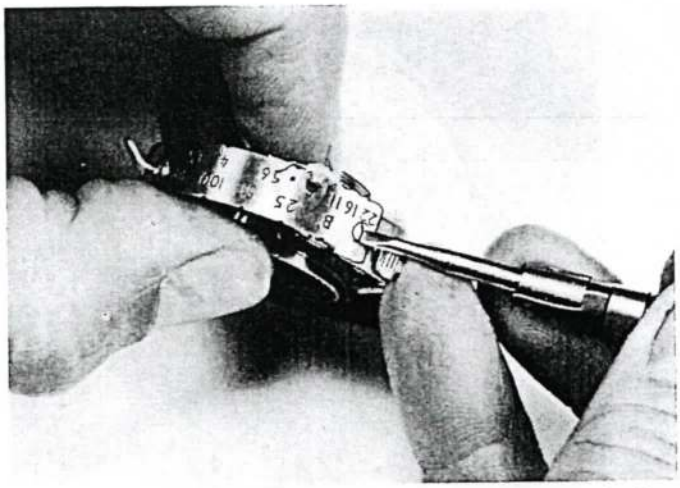
157. Place the bulb lever spring on the bulb lever post with the short end against the case.



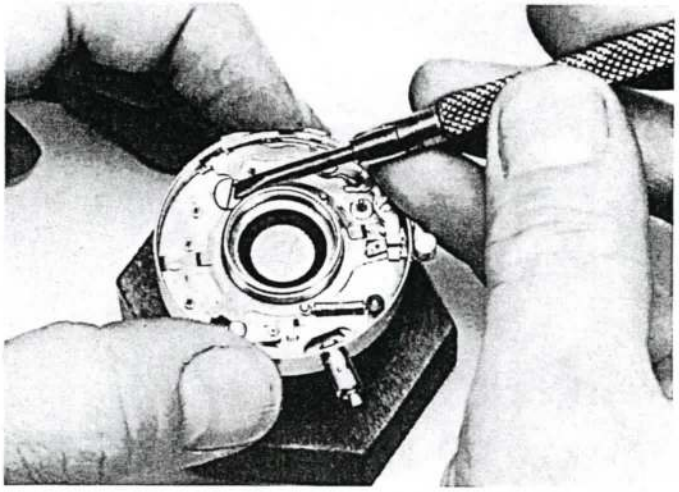
160. Replace the trigger assembly and trigger assembly screw.



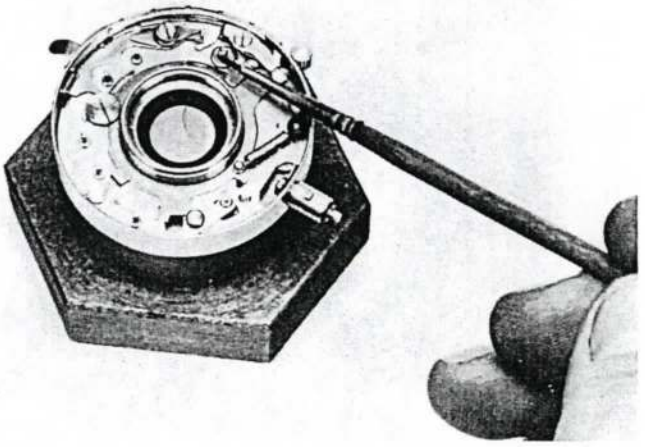
158. Place the bulb lever on the bulb lever post. Then put the long end of the bulb lever spring against the groove in the lever.



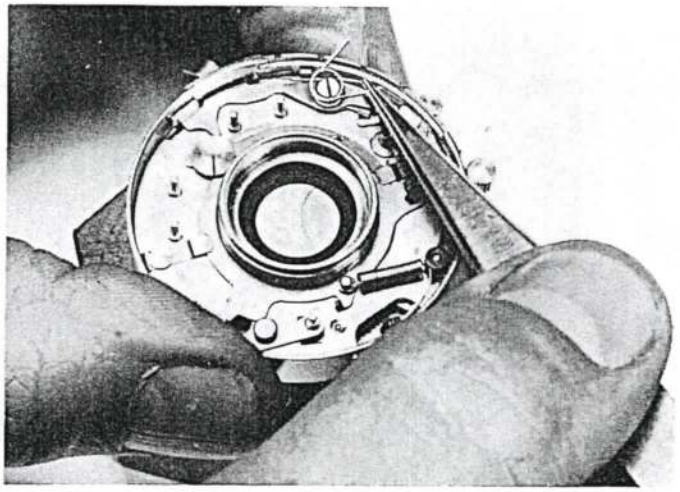
161. Replace the speed and diaphragm plate and plate screws.



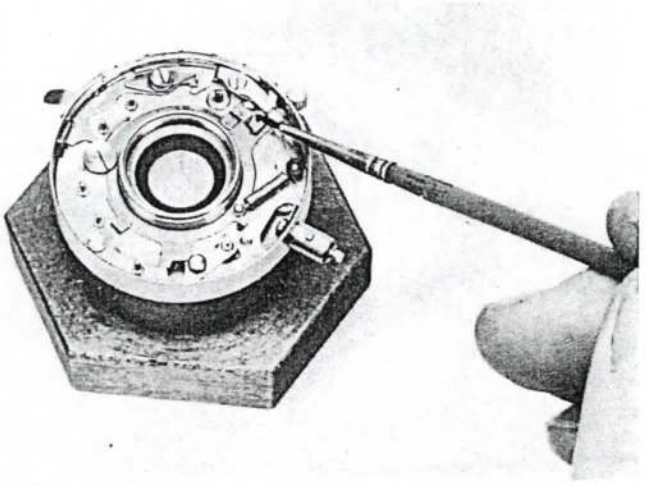
162. Replace the trigger guide screw.



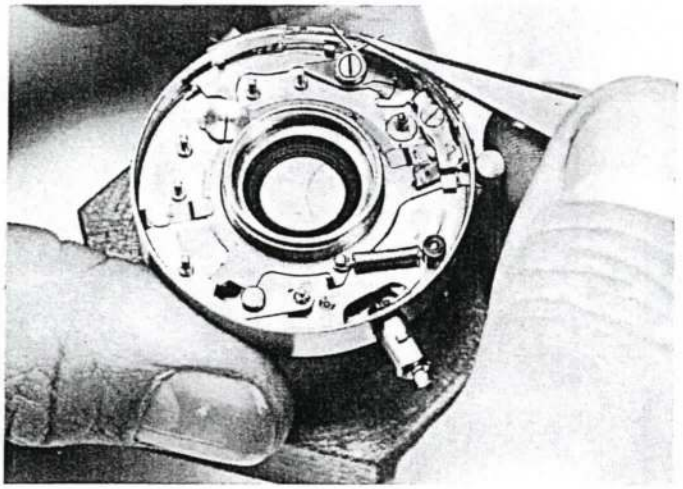
165. Lubricate the synchro sector stud.



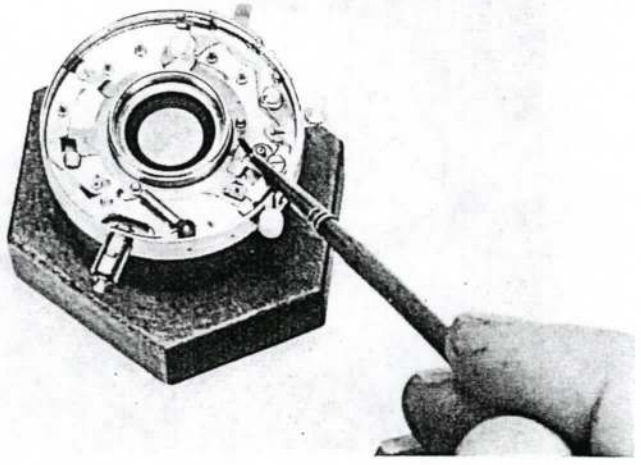
163. Replace the trigger latch spring, with the short end of the spring against the case and the other end of the spring against the latch.



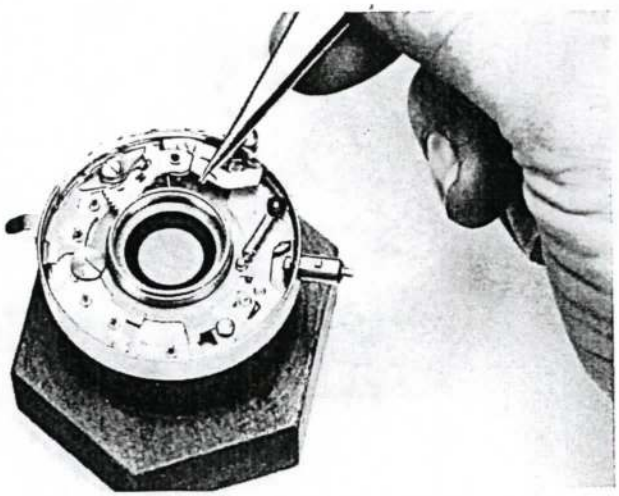
166. Lubricate the drive ring block.



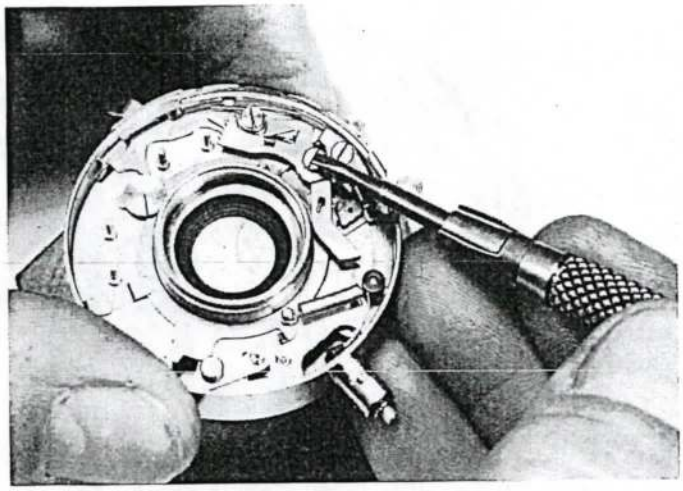
164. Replace the trigger spring, with the short end of the spring against the trigger lug and the long end of the spring against the case.



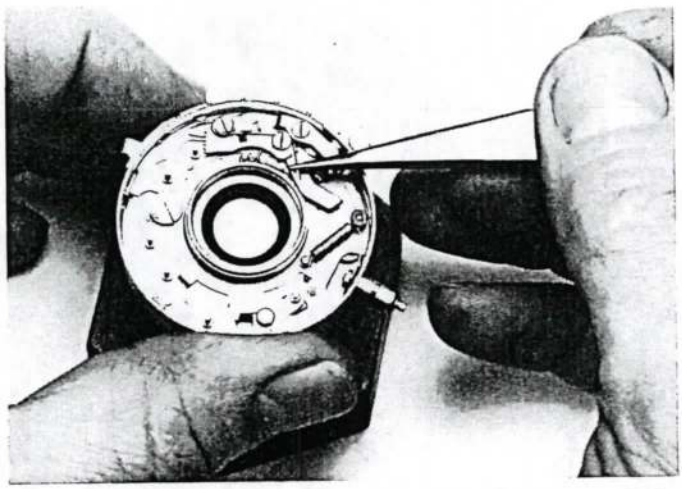
167. Lubricate the drive ring stud.



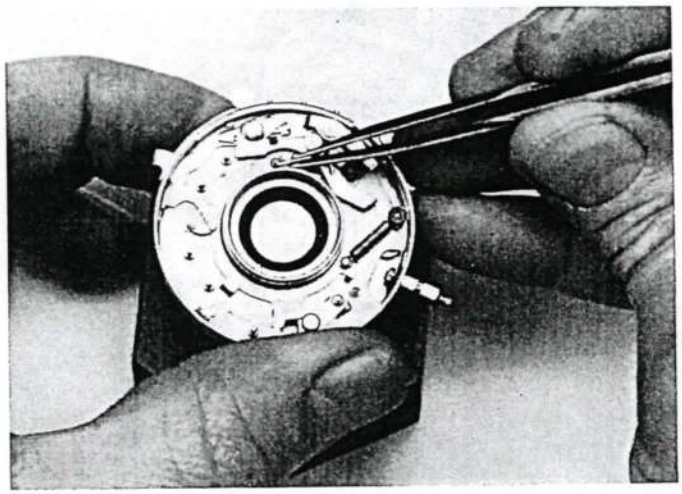
168. Place the synchro sector on top of the synchro sector drive spring with the offset end of the spring in the small sector hole. Hold the sector and spring together and place them on the synchro stud.



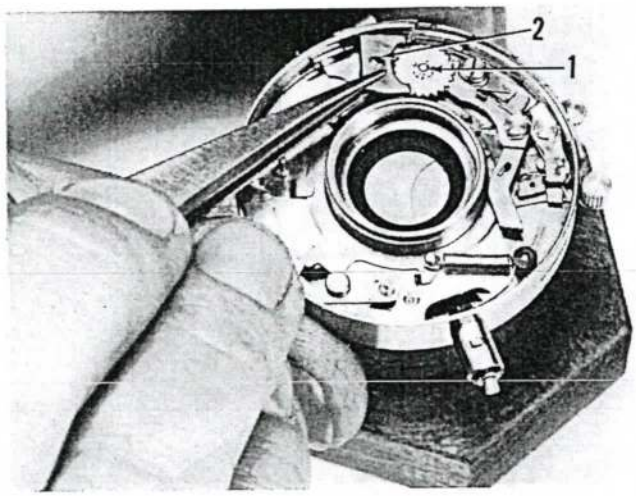
169. Replace the synchro sector screw.



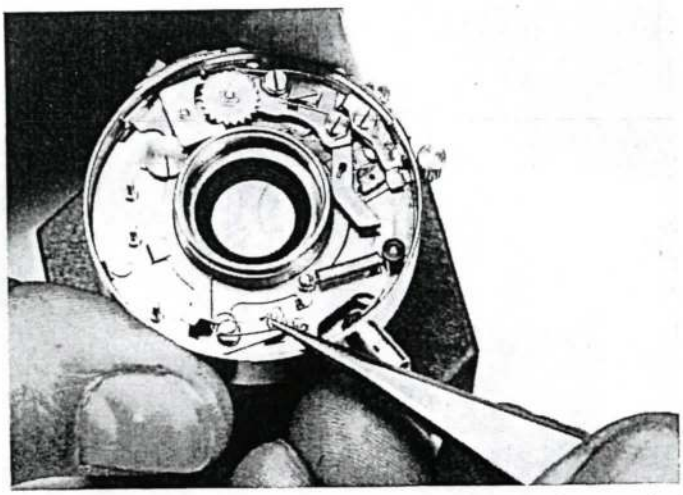
170. Replace the synchro sector return spring with the short end of the spring against the sector lug.



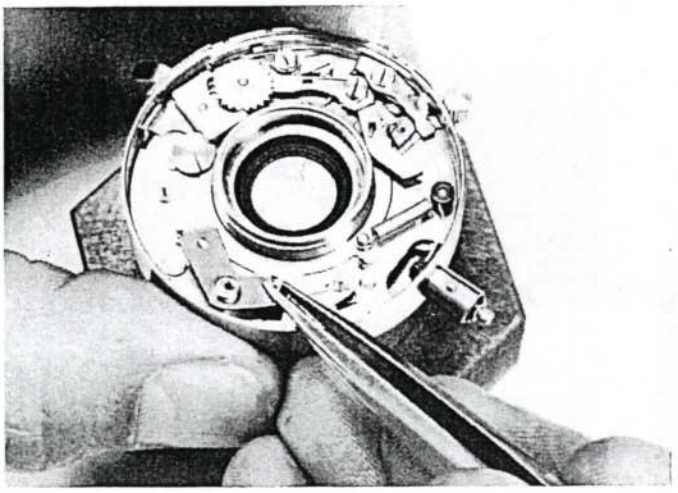
171. Place the other end of the synchro sector return spring against the lens tube in the groove provided.



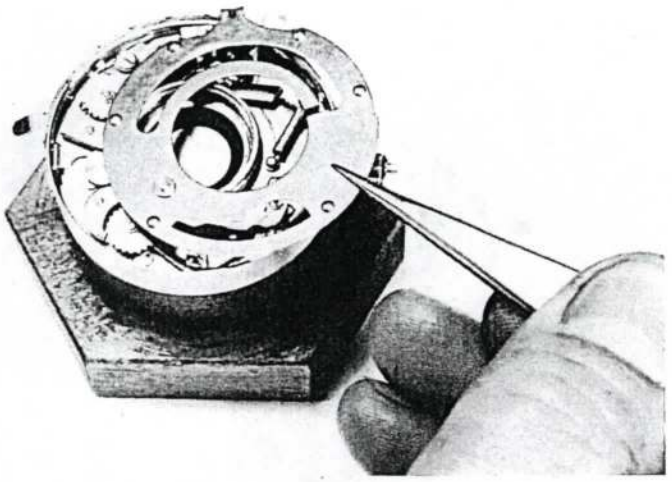
172. Replace the star wheel (arrow 1), and the synchro pallet (arrow 2).



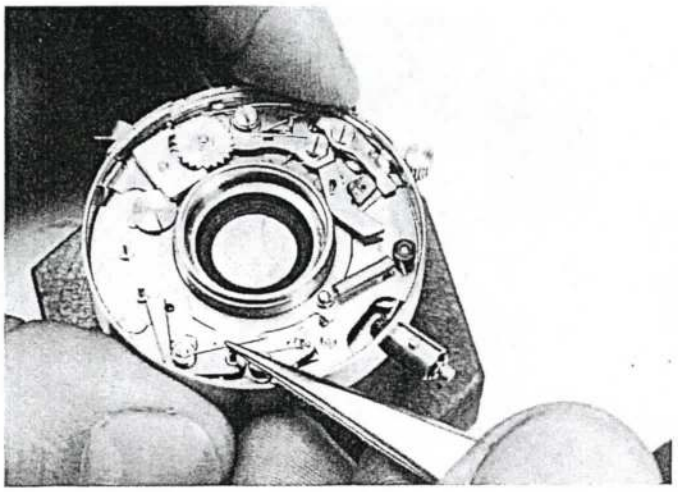
173. Replace the blade latch spring with the long end of the spring against the case and the short end against the blade latch stud.



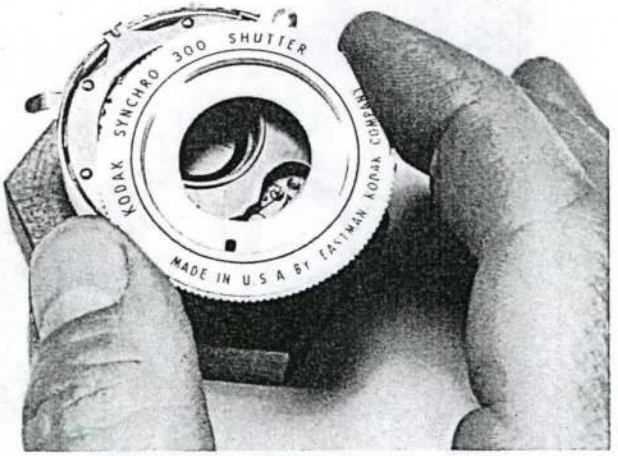
174. Replace the retard sector.



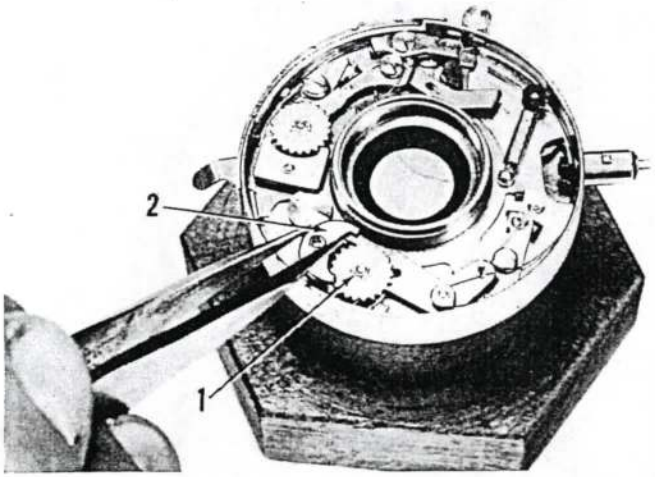
177. Replace the speed control ring.



175. Replace the retard sector spring with the long end of the spring against the case and the short end of the spring against the sector stud.

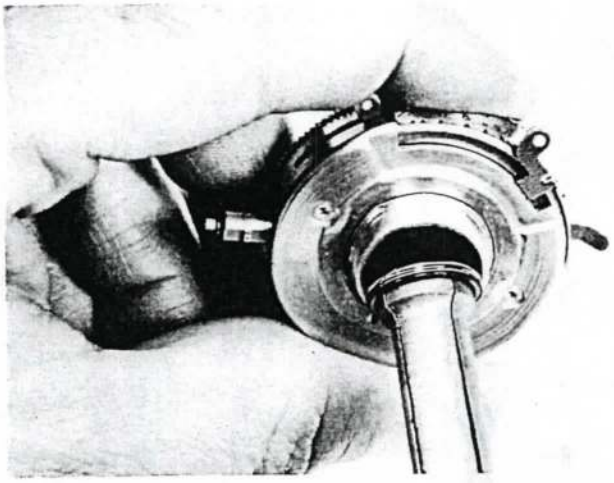


178. Replace the speed actuating ring. See Instruction No. 184.

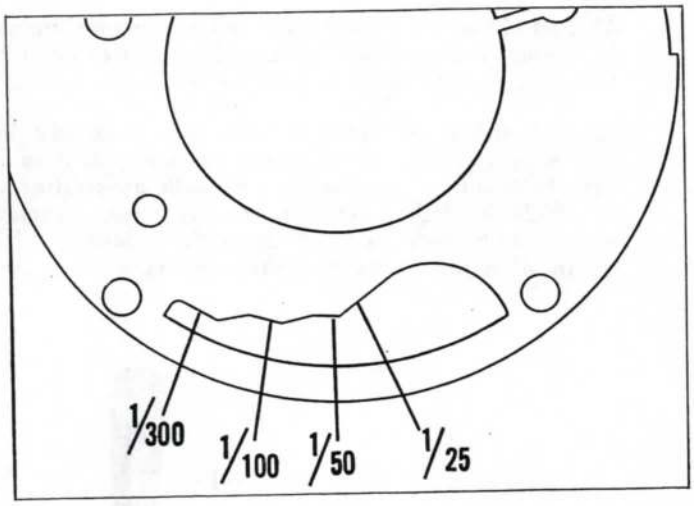


176. Replace the star wheel (arrow 1), and the retard pallet (arrow 2).

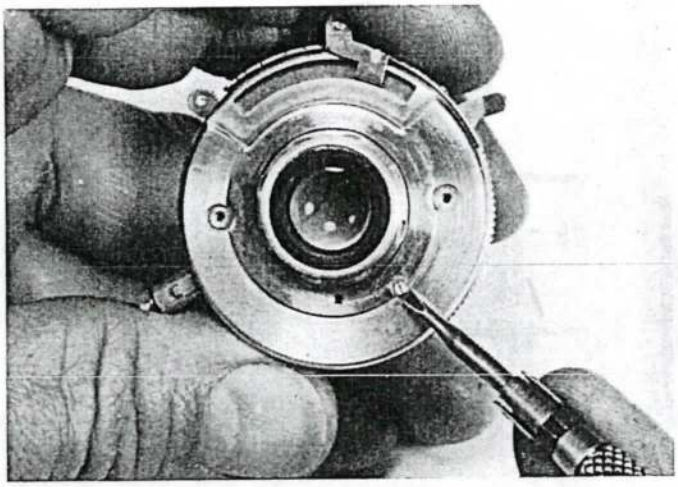
179. Replace the front lens. Place the rear lens in position.



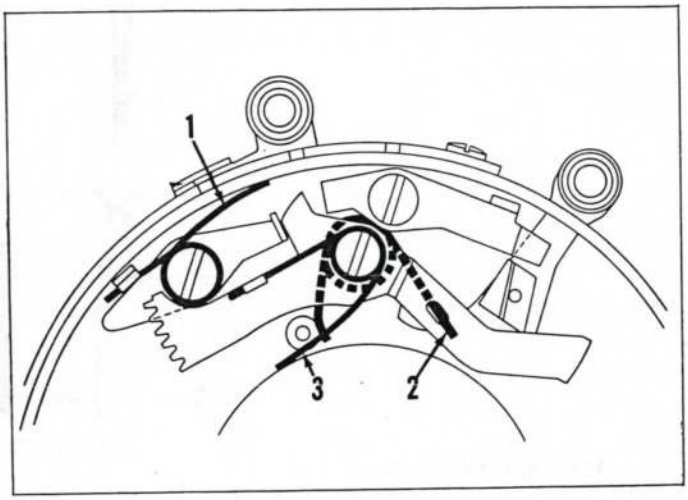
180. Place the clamping ring in position and tighten the ring using tool No. 751 (formerly tool No. 226A) and tool No. 280.



183.



181. Replace the shutter locating screw.



184.

182. Adjusting Speed Actuating Ring
If the actuating ring binds, loosen it by forming the ring slightly with tool No. 758 (formerly tool No. 514B1) and tool No. 759 (formerly tool No. 514B2). Place the ring on the die, engraved side *up*, insert the punch and strike lightly. To tighten the ring, place it on the die with the other side up.

183. Adjusting Speed Control Ring
To adjust the shutter speeds, file or swedge the speed control ring at the proper point. Filing slows the speeds while swedging increases the speeds.

184. Position of springs in shutter
1. Trigger spring
2. Synchro sector drive spring
3. Synchro sector spring

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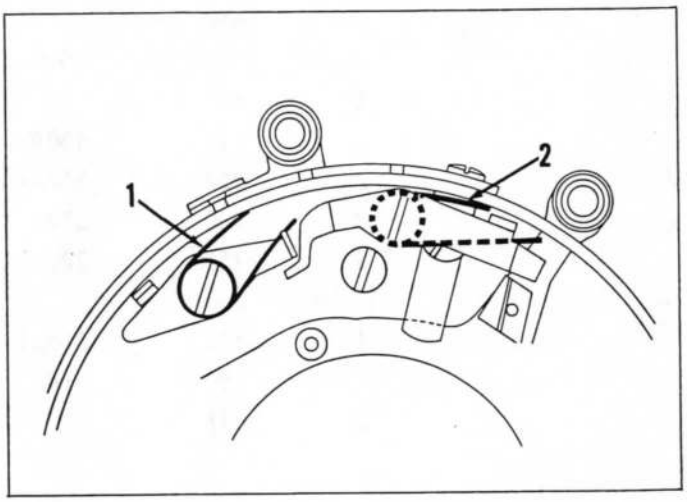
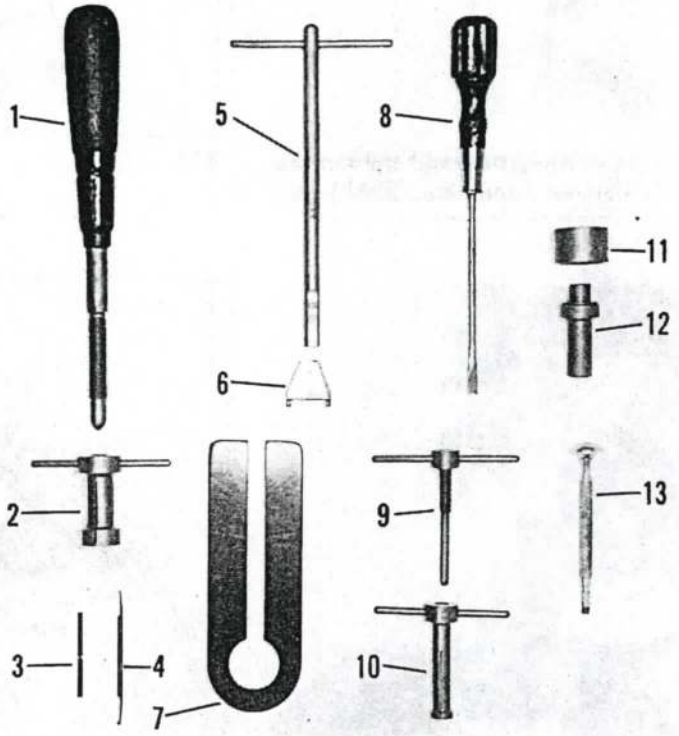
1. Trigger latch spring
2. Bulb lever spring



184.

185. If either the shutter case or mechanism plate assembly needs replacement, the complete shutter must be returned to Rochester, New York for repair.

186. If either the front or rear lens assembly in the Kodak Synchro 300 Shutter needs replacement, it is necessary to install a matched set of both assemblies. Use No. 802260 matched set, front and rear lens assemblies, which can be ordered from Repair Parts Service. Please return all replaced lens assemblies to Repair Parts Service.



187. Special Tools

Index No.	Tool No.	Formerly No.	Name
1	84		Handle for Expanding lens wrench
2	579	311A	Expanding lens wrench (front element)
3	657		Two prong spanner wrench
4	598	501C	Special offset screwdriver
5	650		Handle for retaining collar spanner wrench
6	756	650W	Retaining collar spanner wrench
7	757	514A1	Contracting wrench
8	760	514E	Lug adjusting tool
9	751	226A	Handle for expanding lens wrench
10	280		Expanding lens wrench (rear element)
11	758	514B1	Speed ring forming die
12	759	514B2	Speed ring forming punch
13	611		Hexagonal wrench for diaphragm pointer screw

EASTMAN KODAK COMPANY · Rochester 4, N. Y.

9-53-GLP-B

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